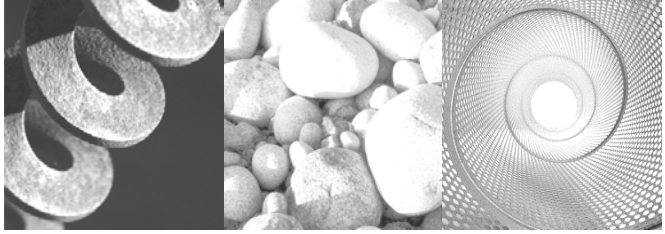

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MassDEP RTN 3-23246

Phase V Status Report No. 9 and Remedial Monitoring Report No. 24

50 Tufts Street, Somerville, Massachusetts

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February 2, 2016

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Acronyms and Abbreviations

µg/L	micrograms per liter
AUL	Activity and Use Limitation
CEP	Critical Exposure Pathway
COPC	Compounds of Potential Concern
CRA	Comprehensive Remedial Action
CSA	Comprehensive Site Assessment
DNAPL	dense non-aqueous phase liquid
EPA	U.S. Environmental Protection Agency
EPMM	Exposure Pathway Mitigation Measure
FIR	Final Inspection Report
GEI	GEI Consultants, Inc.
GLX	Green Line Extension
IH	Imminent Hazard
IRA	Immediate Response Action
lbs	pounds
LQG	Large Quantity Generator
LSP	Licensed Site Professional
MassDEP	Massachusetts Department of Environmental Protection
MBTA	Massachusetts Bay Transportation Authority
MCP	Massachusetts Contingency Plan
MNA	Monitored Natural Attenuation
NAPL	non-aqueous phase liquid
NSR	No Significant Risk
OHM	oil and/or hazardous material
OMM	Operation, Maintenance, and Monitoring
PCE	tetrachloroethylene (perchloroethylene)
PSS	Permanent Solution Statement
RAM	Release Abatement Measure
RAO	Response Action Outcome

RAP	Remedial Action Plan
RIP	Remedy Implementation Plan
RMR	Remedial Monitoring Report
ROS	Remedy Operations Status
RTN	Release Tracking Number
SHE	Substantial Hazard Evaluation
SSDS	sub-slab depressurization system
SVE	soil vapor extraction
TCA	1,1,1-trichloroethane
TCE	trichloroethylene
VOC	volatile organic compound

Executive Summary

On behalf of UniFirst Corporation (UniFirst) of Wilmington, Massachusetts, GEI Consultants, Inc. (GEI) prepared this Phase V Status Report No. 9 and Remedial Monitoring Report (RMR) No. 24 for the site located at 50 Tufts Street in Somerville, Massachusetts (the Site). The Site is identified by Massachusetts Department of Environmental Protection (MassDEP) Release Tracking Number (RTN) 3-23246. The Site includes the 50 Tufts Street property (the Property), other properties in the neighborhoods east and immediately north, south, and west of the Property, and the Michael E. Capuano Early Childhood Center (Capuano Center) located at 150 Glen Street in Somerville, Massachusetts. This report covers the period from June 16, 2015 through December 15, 2015.

Background

From approximately 1955 to 2002, the Property was used for storage and distribution of industrial chemicals, laundry supplies, and dry cleaning supplies. Chemicals stored at, and transported to and from the Property, included chlorinated volatile organic compounds (VOCs). These chlorinated VOCs – particularly tetrachloroethylene (also called perchloroethylene [PCE]), trichloroethylene (TCE), and 1,1,1-trichloroethane (TCA) – have been detected in soil, soil vapor, indoor air, and groundwater at the Property and are therefore the compounds of potential concern (COPCs) for the Site. In some buildings within the Site, chlorinated VOCs have been detected in indoor air samples.

The detection of chlorinated VOCs in indoor air at some buildings required the implementation of an Immediate Response Action (IRA). The "Immediate Response Action Plan" associated with RTN 3-23246 was submitted to MassDEP on January 9, 2006. The Site was classified as Tier IC (Permit No. W085813). The "Phase II Comprehensive Site Assessment (CSA), Method 3 Risk Characterization, and Phase III Remedial Action Plan (RAP)" (Phase II/III) for the Site was submitted to MassDEP on July 14, 2008. The "Phase IV Remedy Implementation Plan" (Phase IV RIP) was submitted to MassDEP on August 10, 2009. The "Immediate Response Action Completion Report and Remedial Monitoring Report No. 11" (IRAC Report) was submitted to MassDEP on November 13, 2009, and the "Immediate Response Action Completion Report Amendment," (IRAC Report Amendment) was submitted to MassDEP on April 1, 2011. The "Phase IV Final Inspection Report, Remedial Monitoring Report No. 15, and Phase V Remedy Operation Status Report" (Phase IV FIR/Phase V ROS) was submitted to MassDEP on August 4, 2011.

Based on amendments to the Massachusetts Contingency Plan (MCP) effective June 20, 2014, the Site does not meet the inclusionary criteria for Tier I (310 CMR 40.0520[2]). GEI reclassified the Site as Tier II on August 1, 2014.

The remedial action alternative (RAA) selected by the Phase III evaluation included:

1. Installing Exposure Pathway Mitigation Measures (EPMMs) to the extent feasible (e.g. vapor barrier and venting system, or sub-slab depressurization systems [SSDSs]), and recording Activity and Use Limitations (AULs) as appropriate, for residences where the soil vapor migration pathway to indoor air has been confirmed, and installing EPMMs in occupied commercial buildings to reduce chlorinated VOC concentrations in indoor air to that which constitutes a condition of No Significant Risk (NSR).
2. Continuing to operate the soil vapor extraction (SVE) system at the Property to remove COPCs from the vadose zone.
3. Conducting a Site-wide Monitored Natural Attenuation (MNA) program to evaluate overburden and bedrock groundwater plume concentrations over time to assess the rate of natural attenuation processes, and to confirm that groundwater concentrations of chlorinated VOCs are generally stable or decreasing.

The Phase IV FIR/Phase V ROS documented that construction and implementation of the Comprehensive Response Action (CRA) has been completed; and additional activities, such as operation and monitoring of active remedial systems, will be conducted under Phase V ROS.

In accordance with the MCP, particularly 310 CMR 40.0892, this Phase V Status Report No. 9 and RMR No. 24 includes the following information regarding the remedial actions being conducted at the Site:

- A description of the type and frequency of operation, maintenance, and/or monitoring (OMM) activities.
- A description of any significant modifications made to the OMM activities since the last reporting period.
- An evaluation of the performance of the remedial action during the reporting period, including whether the remedial action is achieving remedial goals specified in the Phase IV RIP as described in 310 CMR 40.0874(3), and a description of any conditions or problems noted during the reporting period that are, or may be, affecting the performance of the remedial action.
- A description of the measures taken to correct any conditions or problems that may have been encountered during the reporting period.

Following is a summary of OMM activities conducted at the Site to date:

Capuano Center

An SSDS is installed in the east wing of the Capuano Center. In addition, GEI sealed certain slab/wall joints at the Capuano Center to mitigate a potential preferred migration pathway. GEI conducted 24 rounds of indoor air sampling after the SSDS was installed in February 2007. The soil vapor migration pathway to indoor air has been eliminated and a condition of NSR has been achieved for occupants of the Capuano Center. Accordingly, it is GEI's opinion that the system was constructed and is operating in accordance with the design standards provided in the Phase IV RIP, and has achieved the remedial objectives.

Between April 22 and April 24, 2015, GEI observed modifications to the SSDS including the installation of three radon fans on dedicated discharge pipes for each collection header extending above the roofline, and removal of the blower and associated equipment and shed housing. Remote telemetry sensors were also installed on the system. GEI performed post-modification indoor air sampling on May 23 and 24, 2015. VOCs were not detected above laboratory reporting limits during the indoor air sampling, indicating that the system as modified continues to meet the remedial objectives.

GEI will continue to inspect and maintain the system, and continue operation and monitoring under ROS.

Residential and Commercial Properties

As part of the IRA, while Site conditions were still under investigation, GEI took timely action to evaluate and implement measures to eliminate or mitigate Critical Exposure Pathways (CEPs) to the extent feasible. The feasibility of such measures was determined by physical conditions, including the suitability of each property to installation of active or passive vapor controls, and by amenability of property owners to provide legal access. Mitigative measures were initially implemented as IRA activities. The Phase II/Phase III assessment and evaluation of RAAs included response actions to address CEPs as part of the recommended CRA. With the submittal of the Phase IV RIP, the IRA addressing CEPs was closed with an IRAC Report and an IRAC Report Amendment, in accordance with the MCP (310 CMR 40.0427). Following the submittal of the IRAC Report and IRAC Report Amendment, all further response actions were continued under Phase IV. Construction and implementation of the CRA has been completed; additional activities, such as operation and monitoring of active remedial systems, will be conducted under Phase V ROS or, in the future, as active EPMMs implemented as Partial Permanent Solutions Statements (PSSs) with Conditions.

Following is a summary of activities conducted and results obtained with respect to EPMMs through December 15, 2015:

- EPMMs have been installed in 21 residential and commercial properties, not including the EPMMs installed at 50 Tufts Street, 60 Tufts Street, and the Capuano Center. The results of post-EPMM installation indoor air sampling indicate that 20 EPMMs have achieved the remedial objectives. A new passive EPMM was installed at 34 Knowlton Street in June 2014, and initial indoor air sampling indicates that the EPMM is effective. GEI will continue to perform post-EPMM indoor air sampling at 34 Knowlton Street to confirm the performance of the EPMM.
- ARCADIS prepared an Updated 2015 Method 3 Risk Characterization, which incorporated updated soil, groundwater, and indoor air data sets, and also included updated MassDEP toxicity information, particularly for PCE and TCE. Based on the Updated 2015 Method 3 Risk Characterization, and based on the performance of individual EPMMs, a condition of NSR exists for current and future building occupants at each property within the Site.
- MassDEP promulgated amendments to the MCP effective June 20, 2014. GEI continues to assess response actions based on the amendments, and MassDEP's emerging guidance.
- Based on the MCP amendments, a Permanent Solution with Conditions Statement will be submitted for each property with an Option 1, 2 or 3 EPMM where the EPMM has achieved the remedial objectives, an AUL has been recorded for the property, and sufficient post-EPMM indoor air sampling has been conducted. The filing of a Partial PSS with Conditions for an individual property documents the achievement of regulatory closure under the MCP. Therefore, the Phase V provisions will not apply to properties for which a Partial PSS with Conditions has been submitted.

60 Tufts Street

An SSDS has been installed in the 17-unit condominium building at 60 Tufts Street. The SSDS monitoring data show that the sub-slab vacuum field generated by the SSDS influences nearly the entire floor slab area. Indoor air testing results indicate that a condition of NSR has been achieved for building occupants at 60 Tufts Street. Accordingly, it is GEI's opinion that the system was constructed and is operating in accordance with the design standards provided in the Phase IV RIP, and has achieved the remedial objectives.

Remote telemetry was installed on the system on July 24, 2015. GEI will continue to inspect and maintain the system. GEI formerly monitored operational parameters and sub-slab

conditions for the system (e.g., flow rate, vacuum) at the headers on a monthly basis. However, because remote telemetry is now installed on the system, GEI will perform this monitoring on a quarterly basis going forward. GEI will continue operation and monitoring of the SSDS at 60 Tufts Street under ROS.

50 Tufts Street Property

An SSDS and an SVE system have been installed at the Property. The SSDS monitoring data show that the sub-slab vacuum field generated by the SSDS covers most of the building slab area. The building is currently occupied by several tenants. Based on indoor air testing results collected since the combined system has been in operation, a condition of NSR has been achieved for the building at the Property for full-time commercial workers. Accordingly, it is GEI's opinion that the system was constructed and is operating in accordance with the design standards provided in the Phase IV RIP, and has achieved the remedial objectives. GEI will continue operation and monitoring of the combined SSDS/SVE system at 50 Tufts Street under ROS.

Remote telemetry was installed on the 50 Tufts Street system on April 14, 2015. The telemetry system at 50 Tufts Street consists of a wireless remote monitoring hub that will receive telemetry notification from the other active EPMMs at the Site.

Future Activities and Impact of 2014 MCP Amendments for Active EPMMs

The MCP amendments effective June 20, 2014 include new requirements for active EPMMs implemented to meet the conditions for ROS (310 CMR 40.1026), including an operating regime for the active system and remote monitoring and automatic notification in the event of system failure. Operating regimes for active systems at the Site were included in the Phase IV FIR/Phase V ROS submitted on August 4, 2011, and included an OMM plan for the active systems.

Telemetry had previously been installed at 50 Tufts Street, 60 Tufts Street, and the Capuano Center to provide shutdown notification to GEI. The MCP amendments require that remote telemetry provide the owner and operator of the building and MassDEP notification upon failure of the system.

Following is a summary of telemetry installation activities conducted through December 15, 2015:

- Installation of the wireless telemetry hub at 50 Tufts Street.

- Remote telemetry transmitters have been installed at the Capuano Center, 31-33 Knowlton Street, 35-37 Knowlton Street, 13 Morton Street, 18 Morton Street, 27 Tufts Street, 60 Tufts Street and 103 Washington Street.
- GEI will continue communications with the owners of the remaining active EPMM properties (95 Franklin Street, 9 Knowlton Street, 13 Knowlton Street and 23 Tufts Street) to seek access for installation of telemetry.

50 Tufts Street Contaminant Mass Removal

The combined SSDS/SVE system installed at the Property serves to protect indoor air quality and to remove source material from the vadose zone below and around the building. Monitoring data from both the SSDS and SVE components through November 30, 2015 show that approximately 8,681 lbs of VOCs have been removed from the vadose zone at the Property. GEI will continue operation and monitoring of the combined SSDS/SVE system at 50 Tufts Street under ROS.

GLX Project

The Massachusetts Bay Transit Authority (MBTA) is designing and constructing the Green Line Extension (GLX) Project which will extend existing MBTA Green Line service to Union Square in Somerville and beyond to College Avenue in Medford. The GLX Project includes significant infrastructure improvements in the vicinity of the Site, including a new pump station, reconstruction of the bridge passing over Washington Street, new train tracks within the MBTA right-of-way, and utility improvements. A new train station will be constructed just south of the Site boundary.

On behalf of the MBTA, between September 2012 and April 2014, Kleinfelder of Cambridge, Massachusetts, conducted subsurface investigations in the vicinity of the Site as part of the GLX Project. The investigations included soil borings and monitoring well installation. The subsurface investigations performed by Kleinfelder have further confirmed the disposal site boundary in the vicinity of Washington Street. Any response action associated with GLX construction will be performed as a Release Abatement Measure (RAM) by the MBTA.

Monitored Natural Attenuation

An evaluation of the MNA program indicates that the groundwater plumes are stable. GEI will conduct groundwater sampling once per year at the majority of monitoring wells at the Site to confirm that the overburden and bedrock groundwater plumes remain stable.

During this reporting period, semi-annual groundwater sampling was conducted at monitoring wells MW118D, MW121D, and MW122 to monitor recent fluctuations in groundwater concentrations at these locations. These results are within a range of fluctuation that is consistent with continuing plume stability, particularly when considered in context with prior groundwater results from all monitoring wells. GEI did not sample MW112A in this semi-annual monitoring event because it was inaccessible. GEI will perform site-wide groundwater sampling again, in spring 2016.

Remedial Monitoring Report No. 24

Remedial Monitoring Report No. 24, documenting OMM activities of active remedial systems at the Site, is presented in the BWSC-108A and 108B Transmittal Forms in Appendix A.

1. Introduction

On behalf of UniFirst Corporation (UniFirst) of Wilmington, Massachusetts, GEI Consultants, Inc. (GEI) prepared this Phase V Status Report No. 9 and Remedial Monitoring Report (RMR) No. 24 for the site located at 50 Tufts Street in Somerville, Massachusetts (the Site; Fig. 1-1). The Site is identified by Massachusetts Department of Environmental Protection (MassDEP) Release Tracking Number (RTN) 3-23246. The Site includes the 50 Tufts Street property (the Property), other properties in the neighborhoods east and immediately north, south and west of the Property, and the Michael E. Capuano Early Childhood Center (Capuano Center) located at 150 Glen Street in Somerville, Massachusetts (Fig. 1-2). This report covers the period from June 16, 2015 through December 15, 2015.

1.1 Contact Information

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1.2 Background

In 2002, a release of chlorinated volatile organic compounds (VOCs) (particularly tetrachloroethylene [also known as perchloroethylene (PCE)], trichloroethylene [TCE], and 1,1,1-trichloroethane [TCA]) to soil and groundwater at the Property was reported to the MassDEP and assigned RTN 3-23246. Three other RTNs were subsequently issued for the Site: 3-24358, 3-24376, and 3-26114. For tracking and reporting purposes, these RTNs have been consolidated under RTN 3-23246.

The detection of chlorinated VOCs in indoor air at some buildings within the Site required the implementation of an Immediate Response Action (IRA). The "Immediate Response Action Plan" associated with RTN 3-23246 was submitted to MassDEP on January 9, 2006. The Site was classified as Tier IC (Permit No. W085813). The "Phase II Comprehensive Site Assessment (CSA), Method 3 Risk Characterization, and Phase III Remedial Action Plan (RAP)" (Phase II/III) for the Site was submitted to MassDEP on July 14, 2008. The "Phase IV Remedy Implementation Plan" (Phase IV RIP) was submitted to MassDEP on August 10, 2009. The "Immediate Response Action Completion Report and Remedial Monitoring Report No. 11" (IRAC Report) was submitted to MassDEP on November 13, 2009, and the "Immediate Response Action Completion Report Amendment" (IRAC Report Amendment) was submitted to MassDEP on April 1, 2011. The "Phase IV Final Inspection Report, Remedial Monitoring Report No. 15, and Phase V Remedy Operation Status Report," (Phase IV FIR/Phase V ROS) was submitted to MassDEP on August 4, 2011.

Based on amendments to the Massachusetts Contingency Plan (MCP) effective June 20, 2014, the Site does not meet the inclusionary criteria for Tier I (310 CMR 40.0520[2]). GEI reclassified the Site as Tier II on August 1, 2014.

The Phase II/Phase III identified the following areas of the Site requiring investigation and mitigation:

- The Property;
- The Capuano Center;
- 60 Tufts Street, a 17-unit condominium building north of the Property; and
- Certain residences and commercial buildings located in the vicinity of the Property.

The RAA selected by the Phase III was:

1. Installing Exposure Pathway Mitigation Measures (EPMMs) to the extent feasible (e.g. vapor barrier and venting system, or sub-slab depressurization systems [SSDSs]), and recording Activity and Use Limitations (AULs) as appropriate, for

residences where the soil vapor migration pathway to indoor air has been confirmed, and installing EPMMs in occupied commercial buildings to reduce chlorinated VOC concentrations in indoor air to that which constitutes a condition of No Significant Risk (NSR).

2. Continuing to operate the soil vapor extraction (SVE) system at the Property to remove compounds of potential concern (COPCs) from the vadose zone.
3. Conducting a Site-wide Monitored Natural Attenuation (MNA) program to evaluate overburden and bedrock groundwater plume concentrations over time to assess the rate of natural attenuation processes, and to confirm that groundwater concentrations of chlorinated VOCs are generally stable or decreasing.

As part of the IRA, while Site conditions were still under investigation, GEI took timely action to evaluate and implement measures to eliminate or mitigate Critical Exposure Pathways (CEPs) to the extent feasible. The feasibility of such measures was determined by physical conditions, including the suitability of each property to installation of active or passive vapor controls, and by amenability of property owners to provide legal access. Mitigative measures were initially implemented as IRA activities. The Phase II/Phase III assessment and evaluation of RAAs included response actions to address CEPs as part of the recommended Comprehensive Response Actions (CRAs). With the submittal of the Phase IV RIP, the IRA addressing CEPs was closed with an IRAC Report and IRAC Report Amendment, in accordance with the MCP, particularly 310 CMR 40.0427. Following the submittal of the IRAC Report and IRAC Report Amendment, all further response actions were continued under Phase IV and Phase V.

The CRA for the Site includes continued active operation and maintenance of the existing commercial and residential EPMMs, and the SSDS and SVE system at the Property, for the purpose of achieving a Permanent Solution pursuant to 310 CMR 40.0890. It is GEI's opinion that the Site meets the requirements for ROS in accordance with the MCP (310 CMR 40.0893[2]):

- The Phase III RAP was completed on July 14, 2008. The Phase IV RIP was completed on August 10, 2009.
- A final inspection has been performed and confirmed that the CRA has been constructed and implemented in accordance with the Phase IV RIP and is meeting projected design standards to achieve a Permanent Solution.
- Each source of oil and/or hazardous material (OHM) is controlled at the Site. Non-aqueous phase liquid (NAPL) is not visibly present at the Site. Any dense non-aqueous phase liquid (DNAPL) that may be present is not migrating and exists in a stable configuration. The Phase III demonstrated that it is not feasible to eliminate DNAPL at the Site. The dissolved-phase groundwater plumes and

vapor plumes are stable and are not causing an increase in concentrations of VOCs in groundwater, soil, soil vapor, or indoor air. There are no unpermitted releases of OHM at the Site.

- Any substantial hazards have been eliminated as documented in the Substantial Hazard Evaluation (SHE) completed by ARCADIS U.S., Inc. (ARCADIS) of Chelmsford, Massachusetts in August 2011. ARCADIS also completed a Site-wide Method 3 Risk Characterization in August 2015, and based on the performance of individual EPMMs, a condition of NSR exists for current and future building occupants at each property within the Site.
- GEI has identified the longest duration of a shutdown of each active EPMM that would be consistent with levels of exposure that do not pose an Imminent Hazard (IH) and poses a condition of NSR.

Construction and implementation of the CRA have been completed; additional activities, such as operation and monitoring of active remedial systems, or installation of new EPMMs, will be conducted under Phase V. The Site will operate in ROS until a Permanent Solution is achieved, except for any portions of the Site that may be closed under Partial Permanent Solutions Statements (PSSs) with Conditions. Operating the SSDS and SVE systems, together with MNA, will ultimately achieve a Permanent Solution for the Site.

GEI will continue to conduct annual operation, maintenance, and/or monitoring (OMM) activities for installed EPMMs where sufficient indoor air sampling has been conducted, and not repeat indoor air testing, to confirm continued system effectiveness. GEI also conducts groundwater sampling and analysis as part of the MNA program.

1.3 Purpose and Scope

The Site entered Phase V with the submittal of the Phase IV FIR/Phase V ROS on August 4, 2011. In accordance with the MCP (310 CMR 40.0892), this Phase V Status Report No. 9 and RMR No. 24 includes the following information regarding the remedial actions being conducted at the Site:

- A description of the type and frequency of OMM activities.
- A description of any significant modifications made to the OMM activities since the last reporting period.
- An evaluation of the performance of the remedial action during the reporting period, including whether the remedial action is achieving remedial goals specified in the Phase IV RIP as described in 310 CMR 40.0874(3), and a description of any conditions or problems noted during the reporting period that are or may be affecting the performance of the remedial action.

- A description of the measures taken to correct any conditions or problems that may have been encountered during the reporting period.

This report covers the period from June 16, 2015 through December 15, 2015. Details of the engineering concepts, design criteria, construction plans, and specifications were previously provided to MassDEP as part of the Phase IV RIP, IRA Status Reports, RMRs, and IRA Plan Modifications and are not revisited in this report.

1.4 Public Involvement (310 CMR 40.1400)

UniFirst and GEI conducted a series of community meetings to inform property owners, residents, and City of Somerville (the City) officials about the Site. GEI will provide copies of this Phase V Status Report No. 9 and RMR No. 24 to the local public document repositories that were established for the Site at the Somerville Central Public Library and at the City of Somerville Clerk's Office. GEI will also provide an electronic version of this report to the City for posting to the City's web site.

This report was submitted through eDEP (Transaction No. 799773) on February 2, 2016. A copy of the eDEP Transmittal Form (BWSC-108) is provided in Appendix A.

Copies of property owner notification letters, including notice of sampling letters, chemical testing results letters, and other miscellaneous correspondence sent during the reporting period, are in Appendix B.

2. Data Collection

2.1 Groundwater Sampling

GEI conducted semi-annual groundwater sampling at three monitoring wells in November 2015. A summary of all GEI groundwater sampling activities at the Site, including dates of sampling during this reporting period, is in Table 2-1. The groundwater testing results are summarized in Table 2-2, along with groundwater data from previous GEI investigations. Monitoring well locations and the monitoring wells sampled by GEI during this reporting period are shown in Fig. 2-1. The laboratory data reports associated with the November 2015 groundwater testing are in Appendix C.

GEI typically performs semi-annual groundwater sampling to monitor concentration fluctuations in groundwater PCE concentrations in monitoring wells MW122 and MW112A, and TCE concentrations in monitoring wells MW118D and MW121D. Monitoring well MW112A was beneath a parked vehicle and inaccessible during the November 2015 groundwater sampling event. The next site-wide groundwater sampling event will be performed during spring 2016.

2.2 Revised Extent of GW-2 Exceedance for PCE

Fig. 1-2 presents the extent of PCE in shallow groundwater exceeding the Method 1 GW-2 standard throughout the Site, based on Site-wide groundwater sampling results through November 2015.

Fig. 1-2 also presents the extent of PCE in shallow groundwater exceeding 20 micrograms per liter (µg/L). MassDEP has indicated that it intends to revise the Method 1 GW-2 standard for PCE to 20 µg/L, and to promulgate the revised GW-2 standard in a trailer package to the MCP amendments that will be issued at a later date. As demonstrated in Fig. 1-2, the extent of PCE in shallow groundwater exceeding this likely updated Method 1 GW-2 standard is not significantly different from the extent of PCE in shallow groundwater exceeding the current GW-2 standard (50 µg/L). Extensive sub-slab soil vapor and indoor air testing has been performed at the properties that are within the area where PCE in shallow groundwater exceeds 20 µg/L. Accordingly, we do not anticipate that additional investigation will be required if the Method 1 GW-2 standard for PCE is reduced to 20 µg/L.

2.2.1 Groundwater Plume Stability

Based on historic groundwater sampling conducted since 2006, the nature and extent of groundwater contamination at the Site has been well-characterized. In addition, groundwater analytical results are incorporated into the MNA program to support the plume stability

monitoring and natural attenuation evaluation, as discussed in Section 7. Based on an analysis of the Mann-Kendall statistical trend test results, which incorporates the additional groundwater testing data, the PCE, TCE, and TCA groundwater plumes continue to be stable or are slightly decreasing at the Site.

2.3 29 Knowlton Street Basement Sump and Indoor Air Sampling

In July 2015, GEI was informed by the property owners that a sump was installed in the basement of 29 Knowlton Street during renovation. On July 19, 2015, GEI collected a water sample from the sump and submitted it to Accutest for laboratory analysis for VOCs by EPA method 8260. Chlorinated VOCs were not detected in the sump water above laboratory reporting limits. The sump water sampling results are summarized in Table 2-3. The laboratory data report is in Appendix C.

GEI collected indoor air samples from the basement and first floor of 29 Knowlton Street on July 19, 2015. Chlorinated VOCs were not detected in indoor air above laboratory reporting limits. The indoor air testing results are summarized in Table 2-4. The laboratory data report is in Appendix C

Based on the sump water and indoor air sampling results, there is not a complete vapor intrusion pathway at 29 Knowlton Street. However, given that shallow groundwater within the vicinity of 29 Knowlton Street exceeds GW-2 standards, GEI has evaluated the construction of the sump, and is coordinating access with the property owners to seal the sump in February 2016 to eliminate the potential for a vapor intrusion pathway in the future.

2.4 Indoor Air Sampling

From January 2006 through December 15, 2015, GEI collected indoor air samples at 73 residences and commercial buildings. Fig. 2-2 shows buildings where GEI conducted indoor air sampling. The procedure for collecting indoor air samples was presented in IRA Status Report No. 3. Samples are typically collected from the basement and first floor of each building.

Between June 16, 2015 and December 15, 2015, GEI collected indoor air samples from one residential property (29 Knowlton Street). The indoor air samples were submitted to Accutest for laboratory analysis by EPA Method TO-15 with the following modified list of analytes:

- 1,1-Dichloroethane
- 1,1-Dichloroethylene (1,1-DCE)
- trans-1,2-Dichloroethylene
- cis-1,2-Dichloroethylene
- 1,1,1-Trichloroethane (TCA)
- 1,1,2,2-Tetrachloroethane
- 1,1,2-Trichloroethane
- Tetrachloroethylene (PCE)
- Trichloroethylene (TCE)
- Vinyl Chloride

The recent and historic indoor air testing results for 29 Knowlton Street are summarized in Table 2-4. The laboratory data reports are in Appendix C.

2.5 Indoor Air Sampling – Checklists and Methods

GEI collected indoor air samples from the basement and first floor of residences using SUMMA® canisters and regulators provided by Accutest. Each canister was certified clean by Accutest. Copies of the certifications are in Appendix C. Typically, indoor air samples were collected over an approximately 24-hour period in residential buildings.

Flow regulators were attached to the SUMMA® canisters at the location of the testing. The SUMMA® canisters were placed so that the air inlet was approximately 3 to 5 feet above the floor. The laboratory-set flow regulator was then turned on, and the starting pressure and time recorded. The regulator was turned off before reaching ambient pressure, and the final pressure and time were recorded. Pre-Sampling Checklists, Indoor Air Sampling Checklists, and Photo Logs completed for each indoor air sample collected during this reporting period are in Appendix D.

2.6 Meteorological Conditions

GEI typically measures outdoor meteorological conditions during each of the indoor air sampling events. GEI also typically measures indoor temperature and barometric pressure during indoor air sampling. Measurements were taken with a portable barometer and thermometer, and were recorded on the Indoor Air Sampling Checklists (Appendix D). Meteorological conditions recorded during indoor air sampling events for this reporting period are summarized in Table 2-5.

3. Capuano Center

3.1 Background

The remedial system at the Capuano Center is an SSDS with 18 sub-slab extraction points in six classrooms of the east wing. The interior slab/exterior wall joints of the six classrooms were sealed with a flexible epoxy sealant and extraction points were installed horizontally through the exterior wall. GEI began operating the SSDS on February 1, 2007.

Prior to April 2015, the extraction points were attached to three collection headers in exterior underground trenches and were operated by a 1.5-horsepower regenerative blower with pressure gauges, controls, and particulate filter housed in a garden-style shed. One discharge pipe extended from the blower shed to above the roofline of the Capuano Center.

In April 2015, system modifications were performed including removing the regenerative blower and associated equipment, and extending the three dedicated discharge pipes with radon fans for each collection header above the roofline of the Capuano Center. During the system modification, remote telemetry was also installed at the Capuano Center system. The remote telemetry consists of two radio nodes and three pressure switches connected to the three radon fans to send notification of a system shut down remotely to the wireless remote monitoring hub located at the Property.

The system does not include off-gas treatment. Based upon the measured flow rate and VOC concentrations, the annual discharge rate of VOCs from the system has been significantly less than 100 lbs per year; therefore, no off-gas treatment is required per MassDEP Policy No. WSC-94-150: "*Off-gas Treatment of Point-Source Remedial Air Emissions*," dated 1994.

3.2 Remedial Objectives

The design objectives of the Capuano Center remedial system were to:

- Eliminate or mitigate, to the extent feasible, the potential soil vapor migration pathway to indoor air.
- Achieve a condition of NSR for occupants of the Capuano Center.

The SSDS monitoring data show that the sub-slab vacuum field generated by the SSDS influences the southern portion of the east wing. In conjunction with the physical sealing of the slab/wall joint, this indicates the soil vapor migration pathway to indoor air is controlled by the system.

3.3 Inspection and Monitoring

The system has been monitored in accordance with the requirements and schedule in the Phase IV RIP, and in accordance with the requirements and schedule presented in subsequent Phase IV Status Reports, and the Phase IV FIR/Phase V ROS.

Monitoring of the system was historically performed monthly; however, once telemetry was installed on the system, GEI began performing quarterly monitoring in July 2015. Monitoring of system parameters at the headers (flow rate, vacuum, and photoionization detector [PID] readings) and PID readings at indoor and outdoor monitoring points are conducted quarterly. Inspection and monitoring at the Capuano Center was performed three times from June 2015 to December 2015. A summary of monitoring activities conducted during this reporting period is in Table 3-1 and the Field Monitoring Forms are in Appendix E.

3.4 System Modifications

No modifications were made to the system during the reporting period.

3.5 Performance Efficiency and Effectiveness

The SSDS monitoring data show that the sub-slab vacuum field generated by the SSDS influences the southern portion of the east wing. In conjunction with the physical sealing of the slab/wall joint, this indicates the soil vapor migration pathway to indoor air is controlled by the system. GEI also performed post-modification indoor air sampling in May 2015. VOCs were not detected above laboratory reporting limits during the indoor air sampling, indicating that the modified system continues to achieve the remedial objectives.

GEI has completed 24 rounds of indoor air sampling in the Capuano Center. The results of each round of sampling show that the system is meeting remedial design objectives (Table 3-2). Based on the indoor air testing results, and regularly collected system performance data, the soil vapor migration pathway to indoor air has been eliminated and a condition of NSR has been achieved for occupants of the Capuano Center. GEI has discontinued indoor air sampling and will rely on monitoring of operating parameters for the system to confirm continued effectiveness.

3.6 Management of Waste Materials

Infrequently, condensate in system piping may accumulate in the subsurface collection header pipes, or the cleanout drain for the header pipes. If observed, SSDS condensate will be pumped from the headers into the cleanout, which drains into the subsurface at the property.

3.7 Future Phase V Activities

Based on indoor air testing results, a condition of NSR has been achieved for occupants of the Capuano Center and the system is achieving the remedial design objectives. Since remote telemetry is now installed on the system, GEI will continue to monitor operational parameters, sub-slab conditions for the system (e.g., flow rate, vacuum), and collect readings from all indoor and outdoor monitoring points quarterly, to confirm ongoing system performance. During monitoring events, GEI will also perform maintenance tasks, which may include draining accumulated water from the collection headers and correcting any issues observed during routine inspection of system components.

3.7.1 Impact of 2014 MCP Amendments for Active EPMMs

The MCP amendments effective June 20, 2014 include requirements for active EPMMs implemented as part of ROS (310 CMR 40.1026). As discussed above, an operating regime was included in the Phase IV FIR/Phase V ROS submitted on August 4, 2011, which included an OMM plan for the system.

The system formerly included telemetry that provided shutdown notification to GEI. The MCP amendments require that remote telemetry provide the owner and operator of the building and MassDEP notification upon failure of the system. GEI installed remote telemetry as part of the system modifications in April 2015 to provide the newly required shutdown notifications.

The operating regime in the Phase IV FIR/Phase V ROS did not identify the longest duration of a shutdown that would be consistent with a level of exposure that does not pose an IH and that poses NSR, which is a new requirement under the MCP amendments. In accordance with the MCP (310 CMR 40.1026[3][e]), and as presented in Status Report No. 7 and RMR No. 22, the longest duration of a shutdown that would be consistent with a level of exposure that does not pose an IH and that poses NSR is 6 years for the Capuano Center system.

3.7.2 Regulatory Closure

As discussed further in Section 4.5, a Permanent Solution with Conditions can be achieved for properties where an active EPMM has achieved the remedial objectives, an AUL has been recorded for the property, and telemetry is installed. A Partial Permanent Solution with Conditions Statement may be submitted to achieve regulatory closure for the Capuano Center if the owner of the property, the City of Somerville, executes an AUL.

4. Residential and Commercial Properties

4.1 EPMM Installation

Through December 15, 2015, EPMMs had been installed at 21 residential and commercial properties. EPMMs were also installed at 50 Tufts Street, 60 Tufts Street, and the Capuano Center. The EPMMs at 50 Tufts Street, 60 Tufts Street, and the Capuano Center are discussed separately in this report.

Between June 16, 2015 and December 15, 2015, no new EPMMs were installed. Fig. 4-1 shows the buildings with EPMMs installed. Table 4-1 presents the as-built design information for each installed EPMM.

Prior to installing EPMMs in occupied residences, GEI installed indoor air purifiers with activated carbon filters as a mitigation measure. At residences where the concentrations of chlorinated VOCs constituted a condition of NSR, UniFirst left the air purifiers, effectively giving them to the property owners.

The EPMM designs are categorized as Option 1, Option 2, or Option 3, as conceptually defined below:

- Option 1 – SSDS: This option includes the installation of one or more sub-slab vapor extraction points and a collection piping network connected to an electric fan located outside the building envelope. The fan is equipped with a condensate bypass drain and the fan exhaust is discharged above the eave line of the roof. To date, no SSDSs (except for the system at the Property) require off-gas treatment. This option is installed in buildings with adequate sub-slab air flow and a competent concrete slab, or those properties where vapor barrier and venting systems are infeasible.
- Option 2 – Vapor Trench: The vapor trench option consists of a sub-slab venting system installed in a shallow trench around the interior basement perimeter, cement stucco applied to the walls, and an epoxy vapor barrier applied to the slab and stucco walls. The trench is backfilled with crushed stone and finished with approximately three inches of new concrete to meet the existing slab surface. This option is installed in buildings with poor sub-slab air flow, a competent concrete slab, and a fieldstone and/or brick foundation. Sub-slab vapors are vented through a piping network that exits the building envelope at the sill elevation and terminates above the eave line of the roof.

- Option 3 – New Slab: The new slab installation option consists of installing a new concrete slab, a sub-slab vapor barrier, and a floor venting system; applying cement stucco to the walls; and applying an epoxy vapor barrier to the new slab and stucco walls. This option is installed in buildings with poor sub-slab air flow, an incompetent concrete slab, and a fieldstone and/or brick foundation. As with Option 2, sub-slab vapors are vented through a piping network that exits the building envelope at the sill elevation and terminates above the eave line of the roof.

The decision-making process for selecting a conceptual design based on Site-specific conditions is illustrated in Fig. 4-2. Table 4-1 identifies the design option for each EPMM currently installed and the primary engineering components of each.

4.1.1 Remedial Objectives

The design objectives of the EPMMs were to:

- Eliminate or mitigate, to the extent feasible, the potential soil vapor migration pathway to indoor air in residential buildings.
- Achieve a condition of NSR for occupants of the residence or commercial building.

4.2 Option 1 EPMMs

Option 1 EPMMs consist of active sub-slab depressurization achieved by the installation of a radon fan and associated network of piping. Several of the Option 1 EPMMs were originally installed as Option 2 or Option 3 EPMMs; however, the concentrations of PCE measured in the post-installation indoor air did not constitute a condition of NSR, and a fan was installed. Option 1 EPMMs have been installed at the following 10 properties:

- 35-37 Knowlton Street (originally Option 3)
- 31-33 Knowlton Street
- 13 Morton Street
- 18 Morton Street
- 23 Tufts Street
- 103 Washington Street
- 95 Franklin Street (originally Option 2)
- 9 Knowlton Street
- 13 Knowlton Street
- 27 Tufts Street (originally Option 3)

Prior to the MCP amendments effective June 20, 2014, these properties could not achieve a Permanent Solution because of the operation of an active system. Based on the MCP amendments, these properties can now achieve regulatory closure with a Partial PSS with Conditions, provided that the property owner executes an AUL. The condition associated with the PSS would be operation and maintenance of the active EPMM in accordance with the AUL.

4.2.1 Operation and Monitoring

To confirm the performance of an EPMM, indoor air samples are collected shortly after installation is complete. As identified in the Phase IV FIR/Phase V ROS for Option 1 EPMMs, following the initial post-installation indoor air sampling, indoor air samples were collected one time per winter for two consecutive years. In accordance with recent MassDEP guidance "*WSC No. 11-435: Interim Final Vapor Intrusion Guidance*," dated December 2011 and revised March 7, 2013 (2011 VI Guidance, revised 2014), GEI has modified the post-installation indoor air sampling for newly installed Option 1 EPMMs to demonstrate effectiveness. Once a pressure differential has been established, one round of indoor air sampling will be performed during the heating season. The samples are analyzed for Site-specific chlorinated VOCs. Following one round of indoor air sampling, differential pressure across the slab will be used to demonstrate system effectiveness.

Inspection and monitoring also includes measuring VOCs at sub-slab sampling points with a PID, collecting pressure measurements using a manometer, and inspecting system components. If needed, repairs or modifications will be scheduled.

A summary of OMM activities performed for Option 1 EPMMs during this reporting period is presented in Table 4-2. EPMM Inspection Forms are in Appendix F.

103 Washington Street

The tenant at 103 Washington Street has repeatedly turned off the SSDS fans. Whether or not it is feasible to operate the SSDS at 103 Washington Street ultimately depends on whether the tenant permits or prevents operation of the system.

The SSDS at 103 Washington Street was installed based on sub-slab soil vapor results, because the building is used as an auto repair garage, and indoor air sampling has the potential to detect confounding sources of indoor air contamination that are not attributable to the Site. However, the tenant has been receptive to having GEI perform shut-down indoor air testing to evaluate whether operation of the SSDS fans is necessary to maintain a condition of NSR at the property. GEI is preparing to perform an initial round of shut-down indoor air testing in winter 2016, and will develop a shut-down indoor air and soil vapor

sampling plan that will be focused on distinguishing a vapor intrusion pathway versus potential indoor sources.

4.2.2 Impact of 2014 MCP Amendments for Active EPMMs

The MCP amendments effective June 20, 2014 include requirements for active EPMMs implemented as part of ROS (310 CMR 40.1026). As discussed above, an operating regime was included in the Phase IV FIR/Phase V ROS submitted on August 4, 2011, which included an OMM plan for Option 1 EPMMs. However, telemetry was not installed at Option 1 EPMMs.

GEI is in the process of installing a Site-wide telemetry configuration consisting of a wireless remote network that will be tied into the local wireless hub at the Property. Table 4-1 presents the Option 1 EPMMs where telemetry has been installed.

During the winter of 2016, GEI will continue to coordinate the installation of telemetry at active EPMMs concurrently with annual EPMM inspections to minimize disturbance to property owners. GEI is communicating with the owners of 9 Knowlton Street, 13 Knowlton Street, 95 Franklin Street, and 23 Tufts Street to complete the remaining required telemetry installations. The owners of 95 Franklin Street and 13 Knowlton Street have agreed to telemetry installation, and GEI is coordinating with the electrical subcontractor to install telemetry at these properties in February 2016. GEI is communicating with the owner of 9 Knowlton Street to obtain access for telemetry installation. The owner of 23 Tufts Street has been unresponsive to telemetry access request letters, telephone calls, and property visits. GEI will continue access requests for 9 Knowlton Street and 23 Tufts Street to install telemetry during winter 2016.

The operating regime in the Phase IV FIR/Phase V ROS did not identify the longest duration of a shutdown that would be consistent with a level of exposure that does not pose an IH and that poses NSR, which is a new requirement under the MCP amendments. In accordance with the MCP (310 CMR 40.1026[3][e]), and as presented in Status Report No. 7 and RMR No. 22, the following exposure times were calculated for Option 1 EPMMs where pre-EPMM indoor air data was available:

- 13 Knowlton Street: 54 years
- 23 Tufts Street: 11 years
- 27 Tufts Street: 25 years
- 31-33 Knowlton Street: 31 years
- 35-37 Knowlton Street: 4 years

Several Option 1 EPMMs were installed based on sub-slab soil vapor results, and pre-EPMM indoor air data is not available (including 13 Morton Street, 18 Morton Street, 95 Franklin Street, 103 Washington Street, and 9 Knowlton Street). However, based on the close proximity of the active EPMMs throughout the Site, the shutdown exposure times calculated for the properties with pre-EPMM indoor air data are likely representative of the active EPMM properties with no pre-EPMM indoor air data. Therefore, the longest duration of shutdown that would be consistent with a level of exposure that does not pose an IH and that poses NSR at these properties is likely between 4 and 54 years.

4.2.3 Efficiency and Effectiveness

For residential buildings, the primary goals for EPMM performance are the reduction of chlorinated VOC concentrations in indoor air to below laboratory reporting limits to the extent feasible, and to achieve a condition of NSR. For commercial buildings, the standard for successful EPMM performance is the reduction of chlorinated VOC concentrations in indoor air to that which constitutes a condition of NSR.

Through December 15, 2015, the results of post-EPMM installation indoor air sampling and monitoring indicate that each of the Option 1 EPMMs installed or activated at residential and commercial properties has achieved the remedial objectives.

4.2.4 System Maintenance and Modifications

During this reporting period, remote telemetry was installed at the Option 1 EPMMs located at 31-33 Knowlton Street, 18 Morton, 27 Tufts Street, and 103 Washington Street.

4.2.5 Management of Waste Materials

No waste materials associated with Option 1 EPMMs were generated during the reporting period.

4.3 Option 2 and 3 EPMMs

Option 2 and 3 EPMMs consist of passive vapor barriers and do not require mechanical operation or maintenance. Option 2 or 3 EPMMs have been installed at the following 11 properties:

- 95R Franklin Street (Option 2)
- 12 Morton Street (Option 3)
- 11 Morton Street (Option 2)
- 4 Morton Street (Option 3)
- 10 Morton Street (Option 3)

- 91-93 Franklin Street (Option 3)
- 17 Knowlton Street (Option 3)
- 32 Knowlton Street (Option 3)
- 34 Knowlton Street (Option 3)
- 19-19A Morton Street (Option 3)
- 166-168 Glen Street (Option 3)

In accordance with the MCP (310 CMR 40.1000) prior to the June 20, 2014 MCP amendments, regulatory closure was achieved with a Class A-3 Response Action Outcome Partial (RAO-P) Statement for several properties with an Option 2 or 3 EPMM. The properties that have achieved a Class A-3 RAO-P are presented in Fig. 4-3. In the amended MCP, the term "Response Action Outcome" has been replaced with "Permanent or Temporary Solution." Subsequent regulatory closure for individual properties with Option 2 or 3 EPMMs will be achieved with Partial PSSs with Conditions. The condition associated with the PSSs with Conditions will be maintenance of the passive EPMM in accordance with an AUL.

34 Knowlton Street

Between December 2013 and March 2014, GEI observed the installation of an Option 3 EPMM at 34 Knowlton Street. The installation and response actions associated with the building construction were conducted as a RAM. GEI submitted a RAM Completion Report to the MassDEP on October 13, 2014 for the response actions. In June 2014, GEI performed post-EPMM installation indoor air sampling at 34 Knowlton Street. Only trans- 1,2- dichloroethylene (trans-1,2-DCE) was detected at low concentrations. As discussed in the RAM Completion report, the detection of trans-1,2-DCE was attributable to an indoor source, and not attributable to a complete vapor intrusion pathway.

On April 7, 2015, GEI collected post-EPMM installation indoor air samples from the basement and first floor of the property. In the sample collected from the first floor, PCE was detected at 70.5 µg/m^3. TCE and cis-1,2-DCE were also detected in the first floor sample at low concentrations. No chlorinated VOCs were detected in the basement sample.

Although the concentration of PCE detected on the first floor on April 7, 2015 was considered to be anomalous, GEI informed MassDEP of the results in order to discuss appropriate follow-up assessment. GEI performed follow-up post-EPMM installation indoor air sampling on April 27, 2015. Samples were collected from the basement, first floor, second floor, and third floor. PCE was detected on the first floor at 2.4 µg/m^3. Trans-1,2- DCE was also detected in the first, second and third floor samples. No chlorinated VOCs were detected in the basement sample.

On April 28, 2015, after the indoor air sampling, GEI collected an air sample from the passive ventilation piping in the basement. No analytes were detected in the vent stack sample. The vent stack was not capped during the sampling. The absence of chlorinated VOCs in vent stack testing results indicates that no significant concentrations of chlorinated VOCs are migrating from soil vapor into the sub-slab venting system at 34 Knowlton Street.

Based on the follow-up indoor air sampling on April 27, 2015, a building content inventory, and communications with the building occupants, the elevated first floor PCE concentrations detected on April 7, 2015 were attributed to dry cleaned clothes and not a vapor intrusion pathway. GEI will perform additional post-EPMM indoor air sampling at 34 Knowlton Street in the winter of 2016 to confirm the performance of the EPMM.

4.3.1 Operation and Monitoring

To confirm the performance of an EPMM, indoor air samples are collected shortly after installation is complete. As identified in the Phase IV FIR/Phase V ROS for Option 2 and 3 EPMMs, following the initial post-installation indoor air sampling, indoor air samples were collected two times per year (including one winter sample) for two consecutive years. In accordance with recent MassDEP 2011 VI Guidance, revised 2014, GEI has modified the post-installation indoor air sampling for newly installed Option 2 and 3 EPMMs to demonstrate effectiveness:

- If groundwater concentrations are less than two times the Method 1 GW-2 standard, and sub-slab soil gas concentrations are less than two times soil gas screening values, and indoor air concentrations are less than two times threshold values (TVs), GEI will perform 2 rounds of indoor air sampling, with one round occurring during the heating season.
- If groundwater concentrations are greater than two times the Method 1 GW-2 standard, and/or sub-slab soil gas concentrations are greater than two times soil gas screening values, and/or indoor air concentrations are greater than two times TVs, GEI will perform quarterly indoor air sampling, with two rounds occurring during the heating season.

Additional indoor air sampling beyond the first year may be performed based on property-specific conditions. Samples will be analyzed for Site-specific chlorinated VOCs. During indoor air sampling, the condition of the EPMM will be inspected and, if needed, repairs or modifications will be scheduled.

Following the completion of post-installation indoor air sampling, annual inspection and monitoring will include inspecting system components. If needed, repairs or modifications will be scheduled.

A summary of OMM activities performed for Option 2 and 3 EPMMs during this reporting period is presented in Table 4-2. EPMM Inspection Forms are in Appendix F.

4.3.2 Efficiency and Effectiveness

For residential buildings, the primary goals for EPMM performance are the reduction of chlorinated VOC concentrations in indoor air to below laboratory reporting limits to the extent feasible, and to achieve a condition of NSR. For commercial buildings, the standard for successful EPMM performance is the reduction of chlorinated VOC concentrations in indoor air to that which constitutes a condition of NSR.

Through December 15, 2015, the results of post-EPMM installation indoor air sampling indicate that most of the Option 2 or 3 EPMMs currently installed at residential properties, except 34 Knowlton Street, have achieved the remedial objectives. GEI will continue to perform post-EPMM indoor air sampling at 34 Knowlton to confirm the performance of the EPMM.

4.3.3 System Maintenance and Modifications

In July 2015, minor maintenance repairs to the epoxy coating were performed in the basements at 32 Knowlton Street, 17 Knowlton Street, 91-93 Franklin Street, 4 Morton Street, and 10 Morton Street. Minor repairs were also performed at 13 Morton Street to reinforce the ceiling support for the interior ventilation piping.

4.3.4 Management of Waste Materials

No waste materials associated with Option 2 or 3 EPMMs were generated during the reporting period.

4.4 Activity and Use Limitations

It is anticipated that AULs may be recorded for each property where an EPMM is installed and the property owner executes the AUL. No AULs were recorded during this reporting period.

4.5 Permanent Solution Statements

An evaluation of the MNA program indicates that the groundwater plumes are stable, overall groundwater concentrations of chlorinated VOCs are not increasing, and natural attenuation processes are occurring at the Site which will likely reduce contaminant concentrations in groundwater over time. Previous investigations have also demonstrated that soil vapor plumes are stable. Visible NAPL has not been observed at the Site, and any DNAPL that may be present is not migrating and exists in a stable configuration. The Phase III

demonstrated that it is not feasible to eliminate DNAPL at the Site. There are no unpermitted releases of OHM at the Site. Accordingly, all sources of OHM at the Site have been eliminated or controlled to the extent feasible.

The Updated 2015 Method 3 Risk Characterization that ARCADIS prepared was presented in Phase V Status Report No. 8 and RMR No. 23. The Updated 2015 Method 3 Risk Characterization incorporated updated soil, groundwater, and indoor air data sets, and also included updated MassDEP toxicity information, particularly for PCE and TCE. Based on the Updated 2015 Method 3 Risk Characterization, a condition of NSR exists for current and future building occupants at each property within the Site. Based on the Updated 2015 Method 3 Risk Characterization, a condition of NSR does not exist for future construction workers performing excavations at the Property or within the MBTA railroad right-of-way. The inhalation of excavation air pathway associated with the MassDEP change in TCE toxicity is the main driver of potential risks for construction workers in both of these exposure areas. However, these construction worker risks can and should be managed with a Health and Safety Plan (HASP) that is prepared and implemented prior to subsurface work in these exposure areas.

Based on a demonstration of source control at the Site, and a condition of NSR at individual properties, many of the individual properties are eligible for a Partial PSS in accordance with the MCP (310 CMR 40.1000). The filing of a Partial PSS for an individual property documents the achievement of regulatory closure under the MCP. Therefore, the Phase V provisions do not apply to properties for which an RAO-P or Partial PSS has been submitted.

The properties that have achieved a Partial PSS are shown on Fig. 4-3. A summary of the different classes of Partial PSSs to be submitted in the future for properties at the Site, depending on the property-specific conditions and the type of mitigation, if any, are discussed below.

Active operation and maintenance is required for Option 1 EPMMs. Based on the MCP amendments effective June 20, 2014, a PSS with Conditions can be achieved for properties with an Option 1 EPMM. GEI has initiated communications with the owners of properties with Option 1 EPMMs to discuss and schedule installation of telemetry, as well as implementation of an AUL to achieve regulatory closure.

4.5.1 Permanent Solution without Conditions

GEI will prepare a Partial PSS without Conditions for residences where multiple lines of evidence have demonstrated the absence of a soil vapor migration pathway to indoor air and an EPMM is not required. GEI will also prepare Partial PSSs for residences where a Method 3 Risk Characterization, based on multiple rounds of sampling, indicated that concentrations of chlorinated VOCs in indoor air constitute NSR, and the feasibility evaluation

demonstrated that installation of an EPMM was infeasible. In addition, GEI will prepare a Partial PSS without Conditions for the portion of the Site occupied by public right-of-ways. The properties that have achieved a Partial PSS without Conditions are shown in Fig. 4-3.

4.5.2 Permanent Solution with Conditions

GEI will attempt to record an AUL at each property with an Option 1, 2 or 3 EPMM to maintain the integrity of the EPMM. After an AUL is recorded, GEI will prepare a Partial PSS with Conditions for residential properties with Option 1, 2 or Option 3 EPMMs where 2 years of post-installation indoor air samples have demonstrated that the EPMM is effective. Following the post-installation indoor air sampling, GEI will continue annual inspections of Option 1, 2 and 3 EPMMs as provided for in the Phase IV RIP. The properties that have achieved a Partial PSS with Conditions are shown in Fig. 4-3. If a property owner does not execute an AUL, inspections will continue as Phase V activities.

4.6 Future Phase V Activities

4.6.1 EPMM Operation and Monitoring

The results of post-EPMM installation indoor air sampling indicate that most of the Option 1, 2, or 3 EPMMs installed at the Site, with the exception of 34 Knowlton Street, have achieved the remedial objectives. GEI will perform additional post-EPMM indoor air sampling at 34 Knowlton Street during the next reporting period as part of post-installation monitoring.

GEI will continue to conduct annual OMM activities for installed EPMMs where sufficient indoor air sampling has been conducted, but not repeat indoor air testing, to confirm it is achieving the remedial design objectives.

GEI does not anticipate the installation of new EPMMs. However, if a new EPMM is installed, GEI will continue the operation and monitoring program outlined in Section 4.2 and Section 4.3.

4.6.2 EPMM Modifications

As discussed in Section 4.2.2, GEI will continue coordination with individual property owners to install telemetry at Option 1 EPMMs to provide the newly required shutdown notifications.

4.6.3 EPMM Closure Sampling

Based on focused Method 3 risk characterization calculations performed by ARCADIS, which incorporate pre-EPMM indoor air sampling results, the Option 1 EPMMs at 31-33 Knowlton Street and 13 Knowlton Street may not be required to maintain a condition

of NSR. This is a result of the updated MassDEP toxicity characterization for PCE issued in January 2014. Since the Option 1 EPMM at 103 Washington Street was installed based on sub-slab soil vapor only, closure indoor air sampling may also demonstrate that the EPMM is not required at this property.

The owner of 31-33 Knowlton Street and the tenant at 103 Washington Street have approved implementation of a closure sampling program to demonstrate that the Option 1 EPMMs at these properties are not required to maintain a condition of NSR. GEI has not yet received permission from the owner of 13 Knowlton Street to perform closure sampling.

In accordance with MassDEP's 2011 VI Guidance, revised 2014, GEI will initiate a closure sampling program during winter 2016 that consists of the following:

- GEI will perform three rounds of indoor air sampling, with one round being performed during the winter;
- The SSDS fan will be shut down for 7 days prior to indoor air sampling;
- The ventilation piping will be capped, or a valve will be installed within the ventilation piping, 7 days prior to sampling to effectively prevent venting; and
- Following each sampling event, the system will be returned to normal operating conditions.

Based on the results of the Option 1 EPMM closure sampling, GEI will re-evaluate the need for an active EPMM to achieve a condition of NSR at these properties.

4.6.4 Installation of New EPMMs

GEI does not anticipate installation of any new EPMMs during the next reporting period.

4.6.5 AULs and Permanent Solutions

As discussed in Section 4.5, the source of contamination at the Site has been controlled. If post-installation indoor air sampling at a property demonstrates that an EPMM continues to achieve the remedial objectives then that property is eligible for a Partial PSS with Conditions.

GEI anticipates recording AULs for each property where an EPMM is installed and a Partial PSS with Conditions is to be issued.

Once the AULs are recorded, GEI will prepare a Partial PSS with Conditions for the properties with EPMMs. As discussed in Section 4.5.1, GEI will prepare Partial PSSs for those properties that did not require mitigation.

5. 60 Tufts Street

5.1 Background

60 Tufts Street is a 17-unit condominium building adjacent to the Property. The remedial system at 60 Tufts Street was designed and constructed as an SSDS. The SSDS includes 12 vertical sub-slab extraction points and 2 horizontal foundation wall extraction points connected to 2 collection headers and a 5-horsepower regenerative blower with pressure gauges, controls, and particulate filter housed in a locked metal enclosure. GEI began operation of the SSDS on April 24, 2009. A discharge pipe extends from the blower through a parking garage deck and discharges above the roofline of the building.

On July 24, 2015, remote telemetry was installed at 60 Tufts Street. The remote telemetry consists of one radio node and one pressure switch connected to the blower to send notification of a system shut down remotely to the wireless remote monitoring hub located at the Property.

The system does not include off-gas treatment. Based upon the measured flow rate and VOC concentrations, the annual discharge rate of VOCs from the system will be significantly less than 100 lbs per year; therefore, no off-gas treatment is required per MassDEP Policy No. WSC-94-150.

5.2 Remedial Objectives

The objectives of the SSDS at 60 Tufts Street are to:

- Eliminate or mitigate, to the extent feasible, the potential soil vapor migration pathway to indoor air.
- Achieve a condition of NSR for occupants of the condominium building.

5.3 Inspection and Monitoring

The system has been monitored in accordance with the requirements and schedule in the Phase IV RIP, and in accordance with the requirements and schedule presented in subsequent Phase IV Status Reports, and the Phase IV FIR/Phase V ROS.

Operational parameters for the system (e.g., flow rate, vacuum) were historically monitored monthly and indoor air quality in Units 1, 4, and 5 and sub-slab conditions were monitored for 2 years following installation of the EPMM. The Phase IV RIP provided for ongoing annual indoor air sampling. However, post-EPMM indoor air sampling and visual

inspections confirmed that the EPMM at 60 Tufts Street has been constructed in accordance with the Phase IV RIP, and has achieved the remedial design objectives. Accordingly, GEI no longer conducts annual indoor air testing, but has continued to monitor operational parameters of the system.

Once remote telemetry was installed on the system, GEI began to perform monitoring of system parameters on a quarterly basis in July 2015. Inspection and monitoring at 60 Tufts Street was performed three times from June 2015 to December 2015. A summary of monitoring activities conducted during this reporting period is provided in Table 5-1 and the Field Monitoring Forms are provided in Appendix E.

5.4 Performance Efficiency and Effectiveness

The SSDS monitoring data show that the sub-slab vacuum field generated by the SSDS influences nearly the entire floor slab area. Indoor air samples were collected in Units 1, 4, and 5, which are the units closest to the ground floor, for 2 years after EPMM installation. The indoor air testing results indicated that a condition of NSR has been achieved for building occupants at 60 Tufts Street and the soil vapor migration pathway to indoor air has been mitigated to the extent feasible.

5.5 Management of Waste Materials

Infrequently, condensate in system piping may accumulate in the cleanout drains for the sub-surface header pipes, or in the moisture separator installed as part of the blower assembly. If observed, the liquid will be drained and dispensed to the bare ground surface at 60 Tufts Street so that it can infiltrate into the subsurface within the Site boundary.

5.6 System Modifications

On July 24, 2015, remote telemetry was installed at 60 Tufts Street.

5.7 Future Phase V Activities

The system is achieving the remedial design objectives and OMM activities will continue. To confirm system performance, GEI will continue to monitor operational parameters and sub-slab conditions for the system (e.g., flow rate, vacuum) on a quarterly basis. During monitoring events, GEI will also perform maintenance tasks as needed, which may include documenting that the blower is in operation, draining accumulated water from the moisture separator or collection headers, changing the filter element for the blower, changing the batteries in the auto-dialer, and correcting any issues observed during routine inspection of system components.

5.7.1 Impact of 2014 MCP Amendments for Active EPMMs

The MCP amendments effective June 20, 2014 include requirements for active EPMMs implemented as part of ROS (310 CMR 40.1026). As discussed above, an operating regime was included in the Phase IV FIR/Phase V ROS submitted on August 4, 2011, which included an OMM plan for the system and the existing telemetry that provides shutdown notification to GEI. As described above, remote telemetry was installed at 60 Tufts Street in July 2015.

The operating regime in the Phase IV FIR/Phase V ROS did not identify the longest duration of a shutdown that would be consistent with a level of exposure that does not pose an IH and that poses NSR, which is a new requirement under the MCP amendments. In accordance with the MCP (310 CMR 40.1026[3][e]), and as presented in Status Report No. 7 and RMR No. 22, the longest duration of a shutdown that would be consistent with a level of exposure that does not pose an IH and that poses NSR is 52 years for the 60 Tufts Street property.

5.7.2 Regulatory Closure

As discussed previously in Section 4.5, a Permanent Solution with Conditions can be achieved for properties where an active EPMM has achieved the remedial objectives, an AUL has been recorded for the property, and telemetry is installed. A Partial Permanent Solution Statement with Conditions may be submitted to achieve regulatory closure for 60 Tufts Street if the condominium association for the property executes an AUL.

6. 50 Tufts Street Property

6.1 Background

The remedial system at the Property was originally designed and constructed as an SSDS that includes 22 sub-slab extraction points inside the building, a 15-horsepower regenerative blower with pressure gauges, controls, and particulate filter, and three 2,000-lb activated carbon adsorbers operated in series for off-gas treatment. As part of the SSDS installation, the building slab was sealed to minimize vapor transmission through the slab. The cracks and joints in the building slab were filled with flexible sealant and a two-part epoxy coating was applied to the surface of the slab. GEI began operating the SSDS on April 30, 2007.

In July and August 2007, SVE components were added to the system as part of the CRA to address residual VOCs in soil. The SVE system includes seven SVE points installed below the pavement in the north and south parking lots on the Property. The SSDS and the SVE system rely upon shared equipment, including the piping manifold, blower assembly, and off-gas treatment units. GEI began operating the SVE system on August 22, 2007.

In April 2015, a wireless telemetry hub was installed at the Property. The telemetry hub will receive telemetry notification from the other active EPMMs at the Site. A radio node was also installed and connected to monitor the 50 Tufts Street system.

6.2 Remedial Objectives

The design objectives of the combined SSDS/SVE system were to:

- Eliminate or mitigate, to the extent feasible, the soil vapor migration pathway to indoor air.
- Achieve a condition of NSR for a commercial full-time worker.
- Reduce the mass of contaminants in the vadose zone.
- Control the potential migration of soil vapor from the Property to the 60 Tufts Street property.

6.3 Inspection and Monitoring

The system has been monitored in accordance with the requirements and schedule in the Phase IV RIP. Monitoring of the system was historically performed monthly; however, once telemetry was installed on the system, GEI began performing quarterly monitoring in July 2015. Operational parameters for the system (e.g., flow rate, vacuum, off-gas treatment

efficiency) were monitored three times from June 2015 to December 2015. GEI also measures the vapor pressure of sub-slab extraction points and monitoring points periodically. GEI uses these sub-slab pressure measurements to confirm system effectiveness. The pipe and hose connections on the pressure side of the blower are examined during monitoring visits for potential leaks. Leaks, if encountered, are corrected immediately. Carbon change-outs are scheduled based on carbon tank monitoring data in order to maximize VOC adsorption while maintaining compliance with regulatory requirements regarding discharge of VOCs to the atmosphere. Procedures to address potential spills of spent activated carbon during carbon change-outs have been developed and are presented in the system OMM Plan provided in the Phase IV RIP.

Based on monitoring for off-gas treatment efficiency, the system off-gas for the combined SSDS/SVE system was within permissible limits during the reporting period. A summary of monitoring activities during this reporting period is provided in Table 6-1, and Field Monitoring Forms are provided in Appendix E.

6.4 Performance Efficiency and Effectiveness

The SSDS monitoring data show that the sub-slab vacuum field generated by the SSDS covers most of the building slab area. In conjunction with the physical sealing of the slab, this indicates the soil vapor migration pathway to indoor air is being mitigated by the system. Based on indoor air testing results collected since the combined system has been in operation, a condition of NSR for full-time commercial workers has been achieved for the building at the Property.

The SVE system monitoring data show that vacuum influence from the SVE points in the south parking lot extends approximately 30 feet south of the building and from the SVE points in the north parking lot extends onto 60 Tufts Street.

Three influent and two effluent samples from the carbon treatment system were collected in May 2007, June 2007, and March 2008. The results of this sampling were compared with PID field measurements to estimate the total mass of VOCs removed from soil vapor between April 2007 and May 2014. However, GEI collected more recent influent and effluent samples in February 2014. The results of the February 2014 influent and effluent sampling are a better indicator of current system conditions, and were used to estimate the total mass of VOCs removed from soil vapor based on PID field measurements beginning in June 2014. Monitoring data from both the SSDS and SVE components through November 30, 2015 show that approximately 8,681 lbs (approximately 644 gallons) of VOCs have been removed from the vadose zone at the Property (Fig. 6-1).

6.5 Management of Waste Materials

Infrequently, condensate in system piping may accumulate in the moisture separator installed as part of the blower assembly. If observed, the liquid is drained from the moisture separator and dispensed to the bare ground surface at the Property so that it can infiltrate into the subsurface within the Site boundary.

Based on the previous quantities of spent carbon generated by the system, a 2013 Hazardous Waste Report was submitted to MassDEP on February 28, 2014, identifying the Property as a Large Quantity Generator (LQG) facility. GEI operated the system as a LQG in 2014. GEI will submit the next biennial Hazardous Waste Report in March 2016.

No remediation waste was generated during the reporting period. A carbon change-out will be performed during the next reporting period.

6.6 System Modifications

No modifications were made to the system during the reporting period.

6.7 Future Phase V Activities

The system is achieving the remedial design objectives. Phase V ROS OMM activities will continue in accordance with the requirements and schedule set forth in the Phase IV RIP.

6.7.1 Impact of 2014 MCP Amendments for Active EPMMs

The MCP amendments effective June 20, 2014 include requirements for active EPMMs implemented as part of a ROS (310 CMR 40.1026). As discussed above, an operating regime was included in the Phase IV FIR/Phase V ROS submitted on August 4, 2011, which included an OMM plan for the system. Remote telemetry was installed at the Property in April 2015.

The operating regime in the Phase IV FIR/Phase V ROS did not identify the longest duration of a shutdown that would be consistent with a level of exposure that does not pose an IH and that poses NSR, which is a new requirement under the MCP amendments (310 CMR 40.1026[3][e]). Indoor air sampling performed at 50 Tufts Street by GeoInsight in September 2006 identified PCE concentrations ranging from 550 to 800 micrograms per cubic meter (µg/m^3), and TCE concentrations ranging from 16 to 150 µg/m^3. In accordance with the MassDEP Fact Sheet "*TCE Toxicity Information: Implications for Chronic and Shorter-Term Exposure*," dated March 27, 2014, the pre-EPMM concentrations in the building would pose an IH even over a short time period, such as a matter of days. However, GEI performed indoor air sampling during an unscheduled SSDS/SVE system shutdown in

March 2015. The March 2015 indoor air concentrations did not pose an IH, and TCE was not detected during the March 2015 indoor air sampling. Based on system monitoring logs, the system was likely down for slightly less than 1 month during the March 2015 shut down. This information indicates that an IH would not be present during a minor shut down of the 50 Tufts Street system. Because the building is currently occupied, sampling cannot be conducted after the system has been shut down for a full 60 days or longer, so the maximum duration for a system shutdown that might pose an IH is not known at this time.

GEI will continue to operate the active EPMM at 50 Tufts Street.

7. Monitored Natural Attenuation

7.1 MNA Program Objectives

MNA is part of the remedial strategy to reach a Permanent Solution for the Site. GEI has implemented an MNA program to confirm on-going natural attenuation is occurring at the Site. The MNA program is described in the MNA OMM Plan presented in the Phase IV RIP. The primary elements of the MNA program include:

- Plume Stability Monitoring: A groundwater sampling plan to monitor overburden and bedrock groundwater plume concentrations through time to confirm that the groundwater plumes are stable, and that overall groundwater concentrations of chlorinated VOCs are not increasing.
- Natural Attenuation Evaluation: An evaluation of overburden and bedrock groundwater plume concentrations through time for indications of the presence and rate of natural attenuation processes.

7.2 MNA Activities

GEI conducted the following MNA activities during the reporting period:

- Groundwater Level Measurements: GEI measured groundwater levels at monitoring wells shown in Table 7-1.
- Groundwater Sampling: GEI collected groundwater samples from three monitoring wells in November 2015, and submitted them for chemical testing for VOCs by EPA Method 8260B. Groundwater samples from a subset of wells were also analyzed for natural attenuation parameters. The sampling locations are shown in Fig. 2-1, the chemical testing results are shown in Table 2-2, and the laboratory data reports are in Appendix C.

GEI evaluated the groundwater chemical testing results collected during MNA activities to update and supplement the plume stability monitoring and natural attenuation evaluation. During this reporting period, annual groundwater sampling was conducted by GEI at three monitoring wells shown in Fig. 2-1.

Based on an analysis of the Mann-Kendall statistical trend test results, which incorporates the additional groundwater testing data, the PCE, TCE, and TCA groundwater plumes continue to be stable.

GEI has been monitoring PCE concentration fluctuations in groundwater in monitoring wells MW122 and MW112A, and TCE concentrations in monitoring wells MW118D and MW121D. Monitoring well MW112A was beneath a parked vehicle and inaccessible during the November 2015 groundwater sampling event. The concentrations decreased slightly in MW121D, and increased slightly in MW118D and MW 122, during the last reporting period. These results are within a range of fluctuation that is consistent with continuing plume stability, particularly when considered in context with prior groundwater results from all monitoring wells.

8. Remedial Monitoring Report No. 24

Remedial Monitoring Report No. 24, documenting OMM activities for active remedial systems at the Site, is presented in the BWSC-108A and 108B Transmittal Forms in Appendix A.

9. References

MassDEP (1994). "Off-gas Treatment of Point-Source Remedial Air Emissions," Massachusetts Department of Environmental Protection, Policy #WSC-94-150, dated 1994.

GEI (2006). IRA Status Report No. 1, 50 Tufts Street, Somerville, MA, RTNs 3-23246, 3-24358 and 3-24376, dated May 8, 2006.

GEI (2006). IRA Status Report No. 2 and Plan Modification No. 3, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated November 13, 2006.

GEI (2007). IRA Plan Modification No. 4, 50 Tufts Street, Somerville, MA, RTNs 3-23246 and 3-26114, dated February 22, 2007.

GEI (2007). IRA Plan Modification No. 1, 50 Tufts Street, Somerville, MA, RTN 3-26114, dated April 12, 2007.

GEI (2007). IRA Plan Modification No. 5, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated May 5, 2007.

GEI (2007). IRA Status Report No. 3, 50 Tufts Street, Somerville, MA, RTN 3-23246 & IRA Status Report No. 1 RTN 3-26114, dated May 10, 2007.

GEI (2007). Remedial Monitoring Report No. 1, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated August 30, 2007.

GEI (2007). Monthly Remedial Monitoring Report No. 2, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated August 30 2007.

GEI (2007). Monthly Remedial Monitoring Report No. 3, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated August 30, 2007.

GEI (2007). Monthly Remedial Monitoring Report No. 4, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated August 30, 2007.

GEI (2007). IRA Plan Modification No. 7, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated October 11, 2007.

GEI (2007). IRA Plan Modification No. 8, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated October 11, 2007.

GEI (2007). Monthly Remedial Monitoring Report No. 5, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated October 19, 2007.

GEI (2007). Monthly Remedial Monitoring Report No. 6A, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated October 31, 2007.

GEI (2007). Monthly Remedial Monitoring Report No. 6B, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated November 8, 2007.

GEI (2007). Monthly Remedial Monitoring Report No. 7A, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated November 8, 2007.

GEI (2007). Monthly Remedial Monitoring Report No. 7B, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated November 8, 2007.

GEI (2007). IRA Status Report No. 4, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated November 9, 2007.

GEI (2008). IRA Status Report No. 5 and Remedial Monitoring Report (RMR) No. 8, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated May 12, 2008.

GEI (2008). Phase II Comprehensive Site Assessment (CSA), Method 3 Risk Characterization, and Phase III Remedial Action Plan (RAP), 50 Tufts Street, Somerville, MA, RTN 3-23246, dated July 14, 2008.

GEI (2008). IRA Status Report No. 6 and Remedial Monitoring Report (RMR) No. 9, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated November 10, 2008.

GEI (2009). IRA Status Report No. 7 and Remedial Monitoring Report (RMR) No. 10, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated May 11, 2009.

GEI (2009). Phase IV Remedy Implementation Plan (RIP), 50 Tufts Street, Somerville, MA, RTN 3-23246, dated May 11, 2009.

GEI (2009). IRA Completion Report and Remedial Monitoring Report (RMR) No. 11, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated May 11, 2009.

GEI (2010). Phase IV Status Report No. 1 and Remedial Monitoring Report No. 12, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated February 8, 2009.

GEI (2010). Phase IV Status Report No. 2 and Remedial Monitoring Report No. 13, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated August 4, 2010.

GEI (2011). Phase IV Status Report No. 3 and Remedial Monitoring Report No. 14, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated February 11, 2011.

GEI (2011). Immediate Response Action Completion Report Amendment, RTN 3-23246, 50 Tufts Street Site, Somerville, Massachusetts, dated April 1, 2011.

GEI (2011). Phase IV Final Inspection Report, Remedial Monitoring Report No. 15, and Phase V Remedy Operation Status Report. 50 Tufts Street, Somerville, Massachusetts, dated August 4, 2011.

GEI (2012). Phase V Status Report No. 1 and Remedial Monitoring Report No. 16, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated February 10, 2012.

GEI (2012). Phase V Status Report No. 2 and Remedial Monitoring Report No. 17, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated August 4, 2012.

GEI (2013). Phase V Status Report No. 3 and Remedial Monitoring Report No. 18, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated February 8, 2013.

GEI (2013). Phase V Status Report No. 4 and Remedial Monitoring Report No. 19, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated August 2, 2013.

GEI (2014). Phase V Status Report No. 5 and Remedial Monitoring Report No. 20, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated February 10, 2014.

GEI (2014). Phase V Status Report No. 6 and Remedial Monitoring Report No. 21, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated August 1, 2014.

GEI (2014). Release Abatement Measure Completion Report for 34 Knowlton Street, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated October 13, 2014.

GEI (2015). Phase V Status Report No. 7 and Remedial Monitoring Report No. 22, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated February 2, 2015.

GEI (2015). Phase V Status Report No. 8 and Remedial Monitoring Report No. 23, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated August 3, 2015.

Tables

Table 2-1. Summary of Groundwater Sampling Activities
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

Sampling Event and Date	Sampled Locations	QA/QC Samples
Quarterly Groundwater Sampling		
5/23/2006	SH-MW1, SH-MW2, SH-MW3, GEO-1, GEO-2, MW-1, MW-	NA
5/24/2006	GEO-3, GEO-4, GEO-5, GEO-6, MW101, MW102 MW103,	Field Duplicate of GEO-3
5/25/2006	SH-4	NA
Groundwater Sampling		
8/7/2006	MW103	NA
Quarterly Groundwater Sampling		
10/4/2006	SH-MW1, SH-MW2, SH-MW3, GEO-3 GEO-4, GEO-5 and	Field Duplicate MW900 (GEO-3)
10/5/2006	GEO-1, GEO-2, MW101, MW102, MW103, MW104 and	NA
Quarterly Groundwater Sampling		
1/16/2007	SH-MW1, SH-MW2, GEO-3, GEO-4, GEO-5, GEO-6,	Field Duplicate MW900 (GEO-6)
1/17/2007	SH-MW3, MW-1, MW-3, GEO-1 and GEO-2	Field Duplicate MW800 (GEO-1)
1/18/2007	MW103, MW106, MW107, MW108, MW109, MW110 and	NA
Groundwater Sampling		
2/20/2007	MW113 and MW114	NA
3/23/2007	MW112A, MW115R AND MW116	NA
Quarterly Groundwater Sampling		
4/12/07	SHMW1, SHMW3, GEO1, GEO2 and MW113	NA
4/13/07	GEO3, MW101, MW102, MW103, MW104, MW106,	Field Duplicate MW900 (MW101)
4/16/07	SHMW2, GEO4, GEO5, GEO6, MW105, MW108, MW109,	Field Duplicate MW901 (GEO6)
5/23/07	MWCS1	NA
Quarterly Groundwater Sampling		
7/18/2007	MW102, MW107, MW108, MW11, MW112A, MW113, MW114, MW115R, M2116 and MW117S	Sample from MW102 was used for MS/MSD Field Duplicate MW900 (MW113) Field Duplicate MW901 (MW116)
7/19/2007	SHMW2, MW104, MW105, MW106, MW117T, MW117D,	NA
7/20/2007	MW118S, MW118T and MW118D	NA
Groundwater Sampling		
8/22/07	MW119S, MW119T, MW120S and MW120D	NA
8/30/07	MW118S, MW118T and MW118D	NA
Quarterly Groundwater Sampling		
10/10/2007	MW102, MW105, MW106, MW107, MW108, MW111, MW112A, MW113, MW114, MW115	Sample from MW102 was used for MS/MSD Field Duplicate MW900 (MW113)
10/11/2007	MW117T, MW117D, MW118S, MW118T, MW118D	NA
10/12/2007	MW116, MW119S, MW119T, MW120S, MW120D, MW201,	Field Duplicate MW901 (MW116)
10/15/2007	MW104, MW117S	NA
10/22/2007	MW121S, MW121D	NA

General Notes:
1. NA = not applicable.
2. QA/QC = quality assurance/quality check.
3. MS/MSD = matrix spike/matrix spike duplicate.
4. VOC = volatile organic compound.
5. All groundwater samples submitted for VOC testing. Selected samples collected in January 2007, April 2010, April 2011, April 2012, April 2013, April 2014, May 2014, and June 2014 were also submitted for natural attenuation parameter testing.

Table 2-1. Summary of Groundwater Sampling Activities
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

Sampling Event and Date	Sampled Locations	QA/QC Samples
Quarterly Groundwater Sampling		
1/9/2008	MW105, MW115	NA
1/10/2008	MW102, MW106, MW107, MW108, MW111, MW112A	Sample from MW102 was used for MS/MSD
1/11/2008	MW104, MW113, MW114, MW116, MW117S, MW118S, MW201, MW202	Field Duplicate MW900 (MW113) Field Duplicate MW901 (MW116)
1/15/2008	MW117T, MW117D, MW118T, MW119S, MW120S,	NA
1/16/2008	MW118D, MW119T	NA
1/17/2008	MW120D	NA
Groundwater Sampling		
1/30/2008	MW122	NA
Quarterly Groundwater Sampling		
4/15/2008	GEO-1, SH-MW3, MW3, MW104, MW113, MW116, MW201, MW202, MW203	Field duplicate MW113 (MW900) Field duplicate MW116 (MW901)
4/16/2008	MW117S, MW117T, MW117D, MW118T, MW118D,	NA
4/17/2008	MW102, MW106, MW107, MW108, MW109, MW111, MW112A, MW114, MW115R, MW120D, MW121S,	Sample from MW102 was used for MS/MSD
4/18/2008	MW105	NA
Quarterly Groundwater Sampling		
7/14/2008	MW105, MW112A, MW121S, MW121D, MW122	Field duplicate MW112A (MW900) Field duplicate MW121D (MW901)
7/15/2008	GEO-1, GEO-2, MW-3, MW104,MW118S, MW118T, MW118D, MW119S, MW119T, MW120S, MW120D,	Sample from MW104 was used for MS/MSD
7/16/2008	MW116, MW117S, MW117T, MW117D, MW118D	NA
Quarterly Groundwater Sampling		
10/21/2008	MW104, GEO-1, GEO-2 MW116, MW117S, MW117T, MW117D, MW118S, MW118T, MW118D, MW202, MW-3	Sample from MW104 was used for MS/MSD
10/22/2008	MW105, MW112A, MW119S, MW119T, MW120S, MW120D, MW121S, MW121D, MW122	Field duplicate MW112A (MW901) Field duplicate MW121D (MW900)
Quarterly Groundwater Sampling		
4/15/2008	GEO-1, SH-MW3, MW3, MW104, MW113, MW116, MW201, MW202, MW203	Field duplicate MW113 (MW900) Field duplicate MW116 (MW901)
4/16/2008	MW117S, MW117T, MW117D, MW118T, MW118D,	NA
4/17/2008	MW102, MW106, MW107, MW108, MW109, MW111, MW112A, MW114, MW115R, MW120D, MW121S,	Sample from MW102 was used for MS/MSD
4/18/2008	MW105	NA
Quarterly Groundwater Sampling		
7/14/2008	MW105, MW112A, MW121S, MW121D, MW122	Field duplicate MW112A (MW900) Field duplicate MW121D (MW901)
7/15/2008	GEO-1, GEO-2, MW-3, MW104,MW118S, MW118T, MW118D, MW119S, MW119T, MW120S, MW120D,	Sample from MW104 was used for MS/MSD
7/16/2008	MW116, MW117S, MW117T, MW117D, MW118D	NA
Quarterly Groundwater Sampling		
10/21/2008	MW104, GEO-1, GEO-2 MW116, MW117S, MW117T, MW117D, MW118S, MW118T, MW118D, MW202, MW-3	Sample from MW104 was used for MS/MSD
10/22/2008	MW105, MW112A, MW119S, MW119T, MW120S, MW120D, MW121S, MW121D, MW122	Field duplicate MW112A (MW901) Field duplicate MW121D (MW900)

General Notes:
1. NA = not applicable.
2. QA/QC = quality assurance/quality check.
3. MS/MSD = matrix spike/matrix spike duplicate.
4. VOC = volatile organic compound.
5. All groundwater samples submitted for VOC testing. Selected samples collected in January 2007, April 2010, April 2011, April 2012, April 2013, April 2014, May 2014, and June 2014 were also submitted for natural attenuation parameter testing.

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50 Tufts Street
Somerville, Massachusetts

Sampling Event and Date	Sampled Locations	QA/QC Samples
Quarterly Groundwater Sampling		
1/12/2009	MW105, MW112A, MW121S, MW121D, MW122	Field duplicate MW112A (MW900) Field duplicate MW121D (MW901)
1/13/2009	GEO-1, GEO-2, MW117S, MW117T, MW117D, MW119S,	NA
1/14/2009	MW104, MW-3, MW116, MW118S, MW118T, MW118D	Sample from MW104 was used for MS/MSD
Quarterly Groundwater Sampling		
4/13/2009	GEO-1, GEO-2, MW105, MW112A, MW119S, MW119T, MW121S, MW121D, MW122	Field duplicate MW121D (MW900) Field duplicate MW112A (MW901)
4/14/2009	MW-3, MW104, MW117S, MW117T, MW117D, MW118T,	NA
4/15/2009	MW102, MW116, MW118S	NA
Quarterly Groundwater Sampling		
7/14/2009	MW105, MW112A, MW116, MW118T, MW121S, MW121D, MW202	Field duplicate MW121D (MW900) Field duplicate MW112A (MW901)
7/15/2009	GEO-1, GEO-2, MW-3, MW104,MW117S, MW117T, MS117D, MW118S, MW118D, MW119S, MW119T,	Sample from MW104 was used for MS/MSD
Quarterly Groundwater Sampling		
10/14/2009	GEO-1, GEO-2, MW104, MW105, MW112A, MW116, MW117S, MW117D, MW118S, MW118D, MW121S,	Field duplicate MW112A (MW900) Field duplicate MW118D (MW901)
10/15/2009	MW119T, MW119S, MW120S, MW120D, MW118T	Sample from MW104 was used for MS/MSD
10/16/2009	MW117T, MW3	
Annual Groundwater Sampling		
4/12/2010	MW104, MW105, MW112A, MW118S, MW118T, MW118D, MW121S, MW121D, MW122, MW202	Field duplicate MW112A (MW900) Sample from MW104 was used for MS/MSD
4/13/2010	GEO-1, GEO-2, SH-MW3, MW116, MW117S, MW117T, MW117D, MW119S, MW119T, MW120S, MW120D	Field duplicate MW116 (MW901)
Semi-Annual Groundwater Sampling		
10/27/2010	MW112A, MW122	NA
Annual Groundwater Sampling		
4/20/2011	MW105, MW112A, MW117D, MW118S, MW118T,	Field duplicate MW112A (MW900)
4/21/2011	GEO-2, SH-MW3, MW104, MW116, MW117S, MW117T	Field duplicate MW116 (MW901) Sample from MW104 was used for MS/MSD
4/22/2011	GEO-1, MW119S, MW119D, MW120S, MW120D, MW202	
Semi-Annual Groundwater Sampling		
11/16/2011	MW112A, MW122	NA
Annual Groundwater Sampling		
4/16/2012	SH-MW-3, MW112A, MW117S, MW117T, MW117D, MW118D, MW119S, MW119T, MW120S, MW120D, MW121S, MW121D	Field duplicate MW112A (MW900)
4/17/2012	GEO-1, MW104, MW105, MW116, MW118T, MW122, MW202	Field duplicate MW116 (MW901) Sample from MW104 was used for MS/MSD

General Notes:
1. NA = not applicable.
2. QA/QC = quality assurance/quality check.
3. MS/MSD = matrix spike/matrix spike duplicate.
4. VOC = volatile organic compound.
5. All groundwater samples submitted for VOC testing. Selected samples collected in January 2007, April 2010, April 2011, April 2012, April 2013, April 2014, May 2014, and June 2014 were also submitted for natural attenuation parameter testing.

Table 2-1. Summary of Groundwater Sampling Activities
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

Sampling Event and Date	Sampled Locations	QA/QC Samples
Semi-Annual Groundwater Sampling		
11/12/2012	MW112A, MW118D, MW121D, MW122	NA
Annual Groundwater Sampling		
4/23/2013	SH-MW-3, MW105, MW117T, MW119S, MW119T, MW120S, MW120D, MW121S, MW121D, MW122, MW202	NA
4/24/2013	GEO-1, MW104, MW112A, MW116, MW117S, MW117D, MW118S, MW118T, MW118D	Field duplicate MW116 (MW900) Field duplicate MW112A (MW901) Sample from MW104 was used for MS/MSD
5/1/2013	GEO-2	
Semi-Annual Groundwater Sampling		
11/18/2013	MW112A, MW118D, MW121D, MW122	NA
Kleinfelder Groundwater Sampling		
2/6/2014	KE-114-140206, KE-115-140206, KE-116-140206, KE-117-140206, MW-SR-140206, WashSW-140206	Sample from WashSW-140206 was a grab sample from the base of an open excavation.
4/8/2014	KE-202D, KE-202S	NA
4/9/2014	KE-117	NA
4/14/2014	KE-204, KE-206, KE-208	NA
4/15/2014	KE-205, KE-207, KE-209, KE-210	NA
Annual Groundwater Sampling		
4/30/2014	MW104, MW121S, MW121D, MW122, SH-MW-3, GEO-1, GEO-2	Sample from MW104 was used for MS/MSD
5/1/2014	MW117S, MW117T, MW117D, MW118S, MW118D, MW118T, MW119S, MW119T, MW120S, MW120D, MW116	Field duplicate MW116 (MW900)
6/11/2014	MW112A	NA
Semi-Annual Groundwater Sampling		
11/18/2014	MW112A, MW118D, MW121D, MW122	NA
Annual Groundwater Sampling		
4/2/2015	MW104, MW116, MW117S, MW117T, MW117D, MW118S, MW118D, MW119S, MW119T, MW121S, MW121D, MW122, SH-MW-3, GEO-1, GEO-2	Sample from MW104 was used for MS/MSD Field duplicate MW116 (MW901)
4/3/2015	MW118T, MW120S, MW120D	
4/17/2015	MW112A	Field duplicate MW112A (MW900)
Semi-Annual Groundwater Sampling		
11/19/2015	MW118D, MW121D, MW122	NA

General Notes:
1. NA = not applicable.
2. QA/QC = quality assurance/quality check.
3. MS/MSD = matrix spike/matrix spike duplicate.
4. VOC = volatile organic compound.
5. All groundwater samples submitted for VOC testing. Selected samples collected in January 2007, April 2010, April 2011, April 2012, April 2013, April 2014, May 2014, June 2014, and April 2015 were also submitted for natural attenuation parameter testing.

Table 2-2. Chemical Testing Results - Groundwater
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

		Sample Location:	GEO-1																			GEO-2												
		Sample Name:	GEO-1	GEO-1	GEO-1	GEO-1	MW800 (FD)	GEO1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-2	GEO-2	GEO-2	GEO2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2
		Well Screen Interval (ft bgs):	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20
		Sample Date:	8/16/04	5/23/06	10/5/06	1/17/07	1/17/07	4/12/07	4/15/08	7/15/08	10/21/08	1/13/09	4/13/09	7/15/09	10/14/09	4/13/10	4/22/11	4/17/12	4/24/13	4/30/14	4/2/15	8/16/04	5/23/06	10/5/06	1/17/07	4/12/07	7/15/08	10/22/08	1/13/09	4/13/09	7/15/09	10/14/09	4/13/10	4/21/11
		Collected By:	GeoInsight	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GeoInsight	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																																
Volatile Organic Compounds (VOCs)																																		
Acetone	8260	µg/l	< 400	< 5.0	< 5.0	< 5.0	< 5.0	9.7	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 10	487	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Benzene			< 20	< 0.50	< 0.50	< 0.50	< 0.50	0.27 J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 5.0	< 0.50	< 0.50	< 2.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane			< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)			< 200	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon disulfide			< 100	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 5.0	4.5 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon tetrachloride			< 20	3.6	1.4	2.3	2.3	5.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene			< 20	0.76 J	0.86 J	0.76 J	0.84 J	0.77 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane			< 40	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10	< 2.0	< 2.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Chloroform			< 20	< 1.0	< 1.0	0.60 J	0.61 J	1.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	0.62 J	< 1.0	0.60 J	0.84 J	< 1.0	< 1.0
Chloromethane			< 40	< 2.0	3.7	< 2.0	1.8 J	6.2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10	< 2.0	< 2.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dichlorobenzene			< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane			< 20	4.3	2.9	5.4	5.6	10.6	< 1.0	0.38 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	2.2	2.0	< 5.0	2.5	1.1	< 1.0	< 1.0	0.29 J	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane			< 20	< 1.0	< 1.0	< 1.0	< 1.0	1.3	< 1.0	13.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethylene			39.8	989	1330 E	247	241	8980	3.0	26.2	1.4	1.3	1.7	< 1.0	2.0	< 1.0	7.9	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	23.2	14.2	26.3	25.2	11.5	13.4	8.4	7.0	17.0	6.5	10.8	13.8	3.7
cis-1,2-Dichloroethylene			< 20	4.3	2.3	3.3	< 1.0	8.7	< 1.0	1.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	1.6	9.0	< 1.0	< 1.0	< 1.0	< 1.0	2.8	< 1.0	< 1.0	3.1	2.1
trans-1,2-Dichloroethylene			< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane			< 20	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 2.0	< 2.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dioxane			NT	< 25	< 25 R	< 25	< 25	< 25	< 25	< 25	< 25	< 25 J+	< 25	< 25	< 25	< 25	367	< 25	< 50	< 25 K-	< 25	NT	< 25	< 25 R	< 130	< 25	< 25	< 25	< 25 J+	< 25	< 25	< 25	< 25	< 25
Ethylbenzene			< 20	< 1.0	< 1.0	< 1.0	< 1.0	0.41 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	3.1 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Hexanone			< 200	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
4-Isopropyltoluene			< 20	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Methyl tert-butyl ether			< 20	64.2	5.3 J+	2.5	2.7	6.9 J+	7.9	< 1.0	< 1.0	0.26 J	1.1	< 1.0	4.8	< 1.0	< 1.0	< 1.0	< 1.0 K-	< 1.0	< 1.0	< 1.0	37.6	79.9	12.8 J+	9.8	16.5	< 1.0	5.9	0.45 J	< 1.0	0.29 J	0.56 J	< 1.0	< 1.0
Methylene chloride			< 200	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 2.0	< 2.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Naphthalene			< 20	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	8.3 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0
Tert-amyl methyl ether			NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,1,1,2-Tetrachloroethane			< 20	5.7	3.0 J	5.7	5.8	15.6	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<1.0	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tetrachloroethylene (PCE)			1880	18600	19500	17300	18000	48500	135	268	115	76.1	64.3	71.5	698	79.2	2580	171	85.1	252	162	285	131	693	1420	120	115	140	110	263 G	202	167	480	66.4
Tetrahydrofuran			NT	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10 G	< 10	NT	< 10	< 10	< 5.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Toluene			< 20	1.2	0.72 J	1.1	0.99 J	2.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	3.4 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane (TCA)			1720	19100	9620 J+	13300	14200	42500 J+	29.5	217	8.5	9.2	10.0	5.9	16.6 J+	7.0	12.2	3.7	2.1	2.3	3.0	490	125	376	867	147 J+	70.5	25.5	22.5	110	29.7	37.5 J+	61.9	4.3
1,1,2-Trichloroethane			< 20	< 1.0	< 1.0	0.94 J	0.99 J	3.8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene (TCE)			898	10000	5530	9090	9660	30600	18.9	70.6	11.0	8.9	8.0	10.1	31.2	8.2	35.6	6.5	4.8	5.9	7.1	60	27.3	170	602	36.0	22.8	20.9	19.7	99.7	31.7	33.4	103	14.7
Vinyl chloride			< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m,p-Xylene			< 40	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 1.0	< 1.0	11.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene			< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylene			ND	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	ND	< 1.0	< 1.0	14.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT		NT	NT	NT	NT	NT	NT	NT		
Arsenic																									< 10								NT	NT
Iron																									< 100								< 100 J+	< 100
Manganese																									NT								< 15	< 15
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																																		
Others			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT		NT	NT	NT	NT	NT	NT	NT		
Methane	8015	µg/l																							< 10								1.58	< 0.30
Ethane	8015	µg/l																							< 10								< 0.10	< 0.10
Ethylene	8015	µg/l																							< 10								< 0.10	< 0.10
Alkalinity	E310.1	µg/l																							104000								44100	50400
Chloride	E325.3	µg/l																							1310000								165000	53700
Iron, Ferrous	3500FE B	µg/l																							NT								NT	NT
Nitrate & Nitrite as N	E353.2	µg/l																							7000								6700	4400
Nitrogen, Nitrate	E353.2	µg/l																							7000								6700	4400
Nitrogen, Nitrite	E354.1	µg/l																							< 10								< 10	< 10
Sodium	6010C	µg/l																							NT								NT	NT
Sulfate	E375.4	µg/l																							88000								117000	105000
Surfactants	E425.1	µg/l																							< 100								< 100	< 100
Total Organic Carbon	E415.1	µg/l																							< 1000								2400	4600

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:

B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 2-2. Chemical Testing Results - Groundwater
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

Sample Location:			GEO-2 (cont)			GEO-3							GEO-4					GEO-5					GEO-6						
Sample Name:			GEO-2	GEO-2	GEO-2	GEO-3	GEO-3	MW900 (FD)	GEO-3	MW900 (FD)	GEO-3	GEO3	GEO-4	GEO-4	GEO-4	GEO-4	GEO4	GEO-5	GEO-5	GEO-5	GEO-5	GEO5	GEO-6	GEO-6	GEO-6	GEO-6	MW900 (FD)	GEO6	MW901 (FD)
Well Screen Interval (ft bgs):			5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20
Sample Date:			5/1/13	4/30/14	4/2/15	8/16/04	5/24/06	5/24/06	10/4/06	10/4/06	1/16/07	4/13/07	8/16/04	5/24/06	10/4/06	1/16/07	4/16/07	8/16/04	5/24/06	10/4/06	1/16/07	4/16/07	8/16/04	5/24/06	10/4/06	1/16/07	1/16/07	4/16/07	4/16/07
Collected By:			GEI	GEI	GEI	GeoInsight	GEI	GEI	GEI	GEI	GEI	GEI	GeoInsight	GEI	GEI	GEI	GEI	GeoInsight	GEI	GEI	GEI	GEI	GeoInsight	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																											
Volatile Organic Compounds (VOCs)																													
Acetone	8260	µg/l	< 10	< 10	< 10	< 1000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2000	< 5.0	< 5.0	< 100	< 50	< 2000	< 5.0	< 5.0	< 250	< 5.0	< 200	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0
Benzene			< 0.50	< 0.50	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 100	< 0.50	< 0.50	< 10	< 5.0	< 100	< 0.50	< 0.50	< 25	< 0.50	< 10	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50
Bromodichloromethane			< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 100	< 1.0	< 1.0	< 20	< 10	< 100	< 1.0	< 1.0	< 50	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0
2-Butanone (MEK)			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1000	< 5.0	< 5.0	< 100	< 50	< 1000	< 5.0	< 5.0	< 250	< 5.0	< 100	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0
Carbon disulfide			< 5.0	< 5.0	< 5.0	< 250	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 100	< 50	< 5.0	< 5.0	< 5.0	< 250	< 5.0	< 5.0	< 5.0	< 5.0	0.81 J	< 5.0	< 10	< 5.0
Carbon tetrachloride			< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 100	< 1.0	< 1.0	< 20	< 10	< 100	< 1.0	< 1.0	< 50	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0
Chlorobenzene			< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 100	< 1.0	< 1.0	< 20	< 10	< 100	< 1.0	< 1.0	< 50	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0
Chloroethane			< 2.0	< 2.0	< 2.0	< 100	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 200	< 2.0	< 2.0	< 40	< 20	< 200	< 2.0	< 2.0	< 100	< 2.0	< 20	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0
Chloroform			< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 100	< 1.0	2.5	< 20	< 10	< 100	< 1.0	0.62 J	< 50	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0
Chloromethane			< 2.0	< 2.0	< 2.0	< 100	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 200	< 2.0	< 2.0	< 40	< 20	< 200	< 2.0	< 2.0	< 100	< 2.0	< 20	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0
1,4-Dichlorobenzene			< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 100	< 1.0	< 1.0	< 20	< 10	< 100	< 1.0	< 1.0	< 50	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0
1,1-Dichloroethane			< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	11.6	11.6	2.6	< 1.0	< 100	2.7	7.1	< 20	< 10	< 100	3.0	9.7	< 50	< 1.0	< 10	2.0	4.4	1.7	1.6	0.92 J	1.1
1,2-Dichloroethane			< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 100	< 1.0	< 1.0	< 20	< 10	< 100	< 1.0	< 1.0	< 50	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0
1,1-Dichloroethylene			7.8	3.8	3.1	108	< 1.0	< 1.0	59.3	59.1	11.5	1.4	< 100	6.1	17.8	< 20	< 10	< 100	8.9	32.7	< 50	< 1.0	< 10	4.6	11.0	4.4	3.2	2.8	3.8
cis-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	2.8	2.6	1.2	< 1.0	< 100	6.3	16.7	< 20	5.5 J	< 100	12.5	35.2	< 50	< 1.0	14.8	9.1	15.4	7.7	6.9	5.3	6.3
trans-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 100	< 1.0	< 1.0	< 20	< 10	< 100	< 1.0	< 1.0	< 50	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0
1,2-Dichloropropane			< 2.0	< 2.0	< 2.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 100	< 2.0	< 2.0	< 40	< 20	< 100	< 2.0	< 2.0	< 100	< 2.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0
1,4-Dioxane			< 25	< 25 K-	< 25	NT	< 25	< 25	< 25 R	< 25 R	< 25	< 25	NT	< 25	< 25 R	< 5.0	< 250	NT	< 25	< 25 R	< 1300	< 25	NT	< 25	< 25 R	< 25	< 25	< 5.0	< 25
Ethylbenzene			< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 100	< 1.0	< 1.0	< 20	< 10	< 100	< 1.0	< 1.0	< 50	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0
2-Hexanone			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1000	< 5.0	< 5.0	< 100	< 50	< 1000	< 5.0	< 5.0	< 250	< 5.0	< 100	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0
4-Isopropyltoluene			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 100	< 5.0	< 5.0	< 100	< 50	< 100	< 5.0	< 5.0	< 250	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0
Methyl tert-butyl ether			4.5	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	1.2 J+	1.1 J+	< 1.0	< 1.0	< 100	< 1.0	1.5 J+	< 20	< 10	< 100	1.3	3.3 J+	< 50	< 1.0	< 10	1.3	1.9 J+	1.2	1.2	0.80 J	0.81 J
Methylene chloride			< 2.0	< 2.0	< 2.0	< 5.0	< 2.0	< 2.0	< 5.0	< 2.0	< 5.0	< 2.0	< 1000	< 2.0	< 2.0	< 40	< 20	< 1000	< 2.0	< 2.0	< 100	< 2.0	< 100	< 2.0	< 2.0	< 2.0	1.3 J	2.5 J	< 2.0
Naphthalene			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 100	< 5.0	< 5.0	< 100	< 50	< 100	< 5.0	< 5.0	< 250	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0
Tert-amyl methyl ether			< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 40	< 20	NT	< 2.0	< 2.0	< 100	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0
1,1,1,2-Tetrachloroethane			< 5.0	< 5.0	<1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 100	< 5.0	0.84 J	< 100	< 50	< 100	< 5.0	< 5.0	< 250	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0
Tetrachloroethylene (PCE)			140	119	76.3	4020	162	157	2720	2340	529	93.2	12900	6690	24100	16700	8240	14400	2440	12900	254 F+	17.9	782	675	1980	632	594 F+	618	497
Tetrahydrofuran			< 10	< 10 G	< 10	NT	< 10	< 10	< 10	< 10	< 10	< 10	NT	< 10	< 10	< 200	< 100	NT	< 10	< 10	< 500	< 10	NT	< 10	< 10	< 10	< 10	< 20	< 10
Toluene			< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 100	< 1.0	< 1.0	< 20	< 10	< 100	< 1.0	< 1.0	< 50	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0
1,1,1-Trichloroethane (TCA)			16.0	15.5	11.4	204	4.0	4.4	78.2 J+	77.2 J+	16.2	< 1.0	1170	113	321 J+	113	70.9	646	246	652	< 50	< 1.0	27.8	42.5	77.2 J+	33.7	25.3	21.2	26.8
1,1,2-Trichloroethane			< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 100	< 1.0	< 1.0	< 20	< 10	< 100	< 1.0	< 1.0	< 50	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0
Trichloroethylene (TCE)			14.3	12.2	9.9	507	14.4	14.1	209	207	70.2	10.0	720	86.8	235	129	74.8	404	146	446	< 50	< 1.0	122	78.8	131	75.3	56.5	55.5	70.5
Vinyl chloride			< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 100	< 1.0	< 1.0	< 20	< 10	< 100	< 1.0	< 1.0	< 50	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0
m,p-Xylene			< 1.0	< 1.0	< 1.0	< 100	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 1.0	< 1.0	< 20	< 10	< 200	< 1.0	< 1.0	< 50	< 1.0	< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0
o-Xylene			< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 100	< 1.0	< 1.0	< 20	< 10	< 100	< 1.0	< 1.0	< 50	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0
Total Xylene			< 1.0	< 1.0	< 1.0	ND	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	ND	< 1.0	< 1.0	< 20	< 10	ND	< 1.0	< 1.0	< 50	< 1.0	ND	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0
Metals (Total)	6010B	µg/l				NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT			NT	NT
Arsenic			NT	NT	NT																					< 10	< 10		
Iron			< 100	NT	NT																					< 100	< 100		
Manganese			< 15	< 15	< 15																					NT	NT		
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																													
Others						NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT			NT	NT
Methane	8015	µg/l	< 0.30	< 10	< 10																					< 10	< 10		
Ethane	8015	µg/l	< 0.10	< 10	< 10																					< 10	< 10		
Ethylene	8015	µg/l	< 0.10	< 10	< 10																					< 10	< 10		
Alkalinity	E310.1	µg/l	64600	69000	48400																					134000	133000		
Chloride	E325.3	µg/l	252000	175000	220000																					825000	825000		
Iron, Ferrous	3500FE B	µg/l	NT	< 100	< 100																					NT	NT		
Nitrate & Nitrite as N	E353.2	µg/l	3300	1700	1600																					3500	3500		
Nitrogen, Nitrate	E353.2	µg/l	3300	1700	1600																					3500	3500		
Nitrogen, Nitrite	E354.1	µg/l	< 10	< 10	< 10																					< 10	< 10		
Sodium	6010C	µg/l	NT	NT	NT																					NT	NT		
Sulfate	E375.4	µg/l	67800	38900	27500																					45800	45500		
Surfactants	E425.1	µg/l	< 100	< 100	< 100																					< 100	< 100		
Total Organic Carbon	E415.1	µg/l	1700	1000	<5000																					< 1000	< 1000		

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:

B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 2-2. Chemical Testing Results - Groundwater
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

Sample Location:			MW-1					MW101					MW102								MW103						MW104						
Sample Name:			MW-1	MW-1	MW-1	MW-1	MW1	MW-101	MW101	MW101	MW101	MW900	MW-102	MW102	MW-102	MW102	MW102	MW102	MW102	MW102	MW-103	MW103	MW103	MW-103	MW103	MW103	MW-104	MW104	MW104	MW104	MW104	MW104	MW104
Well Screen Interval (ft bgs):			Unknown	Unknown	Unknown	Unknown	Unknown	9 to 19	9 to 19	9 to 19	9 to 19	9 to 19	6 to 16	6 to 16	6 to 16	6 to 16	6 to 16	6 to 16	6 to 16	6 to 16	6 to 16	6 to 16	6 to 16	6 to 16	6 to 16	6 to 16	6 to 16	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15
Sample Date:			7/1/02	8/9/04	5/23/06	1/17/07	4/17/07	5/24/06	10/5/06	1/17/07	4/13/07	4/13/07	5/24/06	10/5/06	1/16/07	4/13/07	7/18/07	10/10/07	1/10/08	4/17/08	5/24/06	8/7/06	10/5/06	1/16/07	1/18/07	4/13/07	5/23/06	10/5/06	1/16/07	4/13/07	7/19/07	10/15/07	1/11/08
Collected By:			SHA	GeoInsight	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																															
Volatile Organic Compounds (VOCs)																																	
Acetone	8260	µg/l	< 5.000	< 40000	40.0	36.1	< 2500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0
Benzene			< 5.00	< 2000	2.0	< 0.50	< 250	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NT	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5	< 0.50	0.60	< 0.50	< 0.50	NT	0.43 J	< 0.50
Bromodichloromethane			< 5.00	< 2000	< 1.0	< 1.0	< 500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0
2-Butanone (MEK)			< 5.000	< 4000	< 5.0	< 5.0	< 2500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0
Carbon disulfide			< 5.000	< 10000	< 5.0	< 5.0	< 2500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0
Carbon tetrachloride			< 5.00	< 2000	19.0	22.4	< 500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene			< 5.00	< 2000	1.1	1.2	< 500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0
Chloroethane			< 10000	< 4000	< 2.0	< 2.0	< 1000	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10	2.7	10.3	6.1	4.7	6.9	5.6	2.3
Chloroform			< 7500	< 2000	3.7	1.6	< 500	1.8	< 1.0	< 1.0	< 1.0	1.8	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.65 J	0.62 J	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0
Chloromethane			< 25000	< 4000	< 2.0	14.6	< 1000	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0
1,4-Dichlorobenzene			< 25000	< 2000	< 1.0	< 1.0	< 500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0
1,1-Dichloroethane			< 7500	< 2000	59.8	59.9	< 500	< 1.0	< 1.0	< 1.0	< 1.0	1.6	< 1.0	0.88 J	< 1.0	< 1.0	0.42 J	2.1	4.1	0.51 J	27.2	3.7	13.0	11.5	10.1	7.9	33.0	98.9	57.1	46.8	68.3	86.6	38.7
1,2-Dichloroethane			< 5.00	< 2000	4.0	< 1.0	< 500	< 1.0	< 1.0	< 1.0	3.9 G	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethylene			< 5.00	< 2000	11500	1260	2290	8.7	21.1	14.1	< 1.0	4.6 G	6.3	50.2	30	< 1.0	23.6	39.7	51.8	22.2 C+	13.4	2.0	6.5	4.3	4.3	8.0	3.3	9.4	2.9	10	2.6	4.5	1.7
cis-1,2-Dichloroethylene			< 5.00	< 2000	24.3	7.7	< 500	< 1.0	< 1.0	1.3	< 1.0	2.1 G	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	3.0	2.5	< 1.0	< 1.0	< 5.0	198	435	244	250	194	279	148
trans-1,2-Dichloroethylene			< 7500	< 2000	< 1.0	< 1.0	< 500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	2.2	9.3	6.2	3.6	2.5	4.1	3.5
1,2-Dichloropropane			< 18000	< 2000	4.5	< 2.0	< 1000	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0
1,4-Dioxane			NT	NT	< 25 R	< 25	< 13000	< 25	< 25 R	< 25	< 25	< 25	< 25	< 25 R	< 25	< 25	NT	< 50	< 25	< 25	< 25	< 25	< 25 R	< 25	< 25	< 130	< 25	< 25 R	< 25	< 25	NT	< 25	< 25
Ethylbenzene			< 5.00	< 2000	2.8	4.4	< 500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0
2-Hexanone			< 5.000	< 20000	< 5.0	< 5.0	< 2500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0
4-Isopropyltoluene			< 5.00	< 2000	< 5.0	< 5.0	< 2500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0
Methyl tert-butyl ether			< 10000	< 2000	< 1.0 J+	< 1.0	< 500	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	4.5 J+	2.7	< 1.0	NT	17.3	24.2	1.7 C+	< 1.0	< 1.0	0.65 J J+	< 1.0	< 1.0	< 5.0	< 1.0	10.0 J+	1.0	0.93 J J+	NT	7.2	1.1
Methylene chloride			< 5.000	< 20000	< 2.0	< 2.0	< 1000	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	4.3	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0
Naphthalene			< 5.000	< 2000	< 5.0	2.4 J	< 2500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0
Tert-amyl methyl ether			NT	NT	< 2.0	< 2.0	< 1000	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0
1,1,1,2-Tetrachloroethane			< 5.00	< 2000	38.1	22.8	< 2500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 F+	< 5.0	< 25	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0
Tetrachloroethylene (PCE)			52000	24200	34400	74900	49600	163	171	192	94.0	90.7	200	898	692	20.3	524	685	606	438 C+	2600	592	1510	1200 F+	1250 F-	1510	60.4	160	29.3	39.6	31.2	49.3	12.1
Tetrahydrofuran			NT	NT	< 10	< 10	< 5000	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	NT	< 20	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 50	< 10	< 10	< 10	< 10	NT	< 10	< 10
Toluene			< 7500	< 2000	19.6	15.3	< 500	< 1.0	< 1.0	0.38 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0
1,1,1-Trichloroethane (TCA)			290000	112000	255000	135000	151000	110	146	131	50.5 J+	43.0 J+	< 1.0	65.7 J+	32.6	< 1.0	26.3	69.8	121	21.9 C+	34.0	4.4	14.4 J+	17.6	21.0	< 5.0	21.0	138 J+	23.2	5.6 J+	28.0	89.8	12.5
1,1,2-Trichloroethane			< 7500	< 2000	85.8	16.2	< 500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene (TCE)			220000	128000	175000	120000	103000	50.5	30.2	38.4	47.2	45.7	15.6	89.1	57.0	2.0	46.1	61.0	65.3	35.6 C+	109	24.0	60.4	37.0	38.0	58.7	63.4	110	49.1	51.4	40.4	< 1.0	27.0
Vinyl chloride			< 10000	< 2000	< 1.0	1.2	< 500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	23.7	36.4	47.4	40.4	38.2	68.0	26.4
m,p-Xylene			< 5.00	< 4000	4.8	5.9	< 500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0
o-Xylene			< 5.00	< 2000	9.2	13.8	< 500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0
Total Xylene			ND	ND	14.0	19.7	< 500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	< 10	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic																									< 100								
Iron																									NT								
Manganese																																	
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																																	
Others			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l																							< 10								
Ethane	8015	µg/l																							< 10								
Ethylene	8015	µg/l																							< 10								
Alkalinity	E310.1	µg/l																							53500								
Chloride	E325.3	µg/l																							675000								
Iron, Ferrous	3500FE B	µg/l																							NT								
Nitrate & Nitrite as N	E353.2	µg/l																							8900								
Nitrogen, Nitrate	E353.2	µg/l																							8900								
Nitrogen, Nitrite	E354.1	µg/l																							16								
Sodium	6010C	µg/l																							NT								
Sulfate	E375.4	µg/l																							65700								
Surfactants	E425.1	µg/l																							< 100								
Total Organic Carbon	E415.1	µg/l																							1700								

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:

B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 2-2. Chemical Testing Results - Groundwater
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

Sample Location:			MW104 (cont)													MW105																
Sample Name:			MW104	MW104	MW104	MW104	MW104	MW104	MW104	MW104	MW104	MW104	MW104	MW104	MW104	MW-105	MW105	MW105	MW105	MW105	MW105	MW105	MW105	MW105	MW105	MW105	MW105	MW105	MW105	MW105	MW105	MW105
Well Screen Interval (ft bgs):			5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	19 to 29	19 to 29	19 to 29	19 to 29	19 to 29	19 to 29	19 to 29	19 to 29	19 to 29	19 to 29	19 to 29	19 to 29	19 to 29	19 to 29	19 to 29	19 to 29	19 to 29
Sample Date:			4/15/08	7/15/08	10/21/08	1/14/09	4/14/09	7/15/09	10/14/09	4/12/10	4/21/11	4/17/12	4/24/13	4/30/14	4/2/15	5/24/06	10/5/06	1/17/07	4/16/07	7/19/07	10/10/07	1/9/08	4/18/08	7/14/08	10/22/08	1/12/09	4/13/09	7/14/09	10/14/09	4/12/10	4/20/11	4/17/12	4/23/13
Collected By:			GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																														
Volatile Organic Compounds (VOCs)																																
Acetone	8260	µg/l	4.0 J	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0 J+	9.0	4.8	< 10	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 10
Benzene			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane			0.31 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)			< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon disulfide			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon tetrachloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane			< 2.0	3.9	5.9	< 2.0	< 2.0	2.8	4.2	< 2.0	< 2.0	2.6	1.9 J	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Chloroform			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2.5
1,4-Dichlorobenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane			33.0	71.5	74.3	33.2	37.9	47.1	73.9	19.6	24.3	< 1.0	28.4	27.1	9.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethylene			1.8	5.1	2.4	2.6	2.1	2.2	3.6	1.9	6.1	1.1	1.9	0.95 J	0.40 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethylene			145	203	192 F-	189	236 F-	212	334	112	154	67.3	93.6	95.2	49.8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethylene			2.0	3.2	2.7	2.4	3.0	2.6	2.6	1.1	6.4	< 1.0	3.1	2.3	0.64 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dioxane			< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25 F- K-	< 50	< 25 K-	<25	< 25	< 25 R	< 25	< 25	NT	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25 K-	< 50		
Ethylbenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Hexanone			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
4-Isopropyltoluene			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Methyl tert-butyl ether			0.72 J	3.9	2.4	0.63 J	< 1.0	0.98 J	1.8	< 1.0	< 1.0	0.90 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 K-
Methylene chloride			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Naphthalene			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tert-amyl methyl ether			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,1,1,2-Tetrachloroethane			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<1.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tetrachloroethylene (PCE)			22.4	16.8	22.8	22.6	19.3	22.0	16.9	14	14.8	11.9	9.7	10.1	10.7	7.8	0.69 J	0.67 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.53 J
Tetrahydrofuran			< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10 G	<10	< 10	< 10	< 10	< 10	NT	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Toluene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane (TCA)			10.8	42.9	26.1	13.3	11.8 F+	19.2	24.3 J+	4.4	5.1	11.4	4.3	5.1	2.8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene (TCE)			34.9	37.1	38.2	44.8	53.7 F+	44.4	43.7	24.3	26.4	13.9	14.1	16.3	15.6	< 1.0	3.4	3.2	1.5	1.5	1.6	2.2	1.7	1.7	1.8	1.7	2.3	1.6	0.78 J	1.1	1.8	1.7	1.6	
Vinyl chloride			29.9	41.8 F+	42.6	50.1	66.5	57.0	107.0	34.9	53.9	39.3	28.9	51.7	11.8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m,p-Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT							NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic										NT	NT	NT	NT	NT	NT																			
Iron										2900 J+	11800	10700	15300	8970	NT																			
Manganese										1510	3000	2590	2860	1570	154																			
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron														9890																				
Others			NT	NT	NT	NT	NT	NT	NT							NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l								159	184	724	252	185	<10																			
Ethane	8015	µg/l								1.77	2.0	5.4	3.6	3.2 J	<10																			
Ethylene	8015	µg/l								0.87	1.1	11.6	4.92	3.8 J	<10																			
Alkalinity	E310.1	µg/l								338000	373000	464000	413000	393000	298000																			
Chloride	E325.3	µg/l								32500	189000	100000	247000	82500	74500																			
Iron, Ferrous	3500FE B	µg/l								NT	NT	NT	NT	4800	<100																			
Nitrate & Nitrite as N	E353.2	µg/l								120	320	200	280	150	390																			
Nitrogen, Nitrate	E353.2	µg/l								120	320	200	280	150	390																			
Nitrogen, Nitrite	E354.1	µg/l								< 10	< 10	< 10	< 10	< 10	<10																			
Sodium	6010C	µg/l								NT	NT	NT	NT	46400	NT																			
Sulfate	E375.4	µg/l								41700	45300	29300	52400	104000	62800																			
Surfactants	E425.1	µg/l								< 100	120	190	< 100	< 100	<100																			
Total Organic Carbon	E415.1	µg/l								5900	7400	9800	8500	7500	7000																			

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:

B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 2-2. Chemical Testing Results - Groundwater
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

Sample Location:			MW106						MW107						MW108						MW109			MW110			MW111					
Sample Name:			MW106	MW106	MW106	MW106	MW106	MW106	MW107	MW107	MW107	MW107	MW107	MW107	MW108	MW108	MW108	MW108	MW108	MW108	MW109	MW109	MW109	MW110	MW110	MW110	MW111	MW111	MW111	MW111	MW111	MW111
Well Screen Interval (ft bgs):			9 to 19	9 to 19	9 to 19	9 to 19	9 to 19	9 to 19	2 to 12	2 to 12	2 to 12	2 to 12	2 to 12	2 to 12	2 to 12	2 to 12	2 to 12	2 to 12	2 to 12	2 to 12	3 to 13	3 to 13	3 to 13	3 to 13	3 to 13	3 to 13	4 to 14	4 to 14	4 to 14	4 to 14	4 to 14	4 to 14
Sample Date:			1/18/07	4/13/07	7/19/07	10/10/07	1/10/08	4/17/08	1/18/07	4/13/07	7/18/07	10/10/07	1/10/08	4/17/08	1/18/07	4/16/07	7/18/07	10/10/07	1/10/08	4/17/08	1/18/07	4/16/07	4/17/08	1/18/07	4/17/07	5/23/07	1/18/07	4/16/07	7/18/07	10/10/07	1/10/08	4/17/08
Collected By:			GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																														
Volatile Organic Compounds (VOCs)																																
Acetone	8260	µg/l	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	69.9	< 5.0	9.2	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 50	< 130	NT	< 250	< 5.0	< 10
Benzene			< 0.50	< 0.50	NT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NT	< 5.0	< 13	NT	< 25	< 0.50	< 1.0
Bromodichloromethane			< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 10	< 25	NT	< 50	< 1.0	< 2.0
2-Butanone (MEK)			< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	7.7	< 5.0	1.1 J	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 50	< 130	NT	< 250	< 5.0	< 10
Carbon disulfide			< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 50	< 130	NT	< 250	< 5.0	< 10
Carbon tetrachloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 G	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 10	< 25	< 1.0	< 50	< 1.0	< 2.0
Chlorobenzene			< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.28 J	< 1.0	NT	< 10	< 25	NT	< 50	< 1.0	< 2.0
Chloroethane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 G	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 20	< 50	< 2.0	< 100	< 2.0	< 4.0
Chloroform			1.1	1.2	NT	0.56 J	0.39 J	1.7	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 10	< 25	NT	< 50	1.2	< 2.0
Chloromethane			< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 20	< 50	NT	< 100	< 2.0	< 4.0
1,4-Dichlorobenzene			< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 10	< 25	NT	< 50	< 1.0	< 2.0
1,1-Dichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4.6	4.3	0.52 J	< 1.0	2.1	3.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.2	< 1.0	< 1.0	< 1.0	< 1.0	NT	30.9	15.7 J	16.8	19.1 J	5.6	4.3 C+
1,2-Dichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 10	< 25	0.43 J	< 50	< 1.0	< 2.0
1,1-Dichloroethylene			4.4	6.3	3.4	3.9	4.1	1.5	3.2	3.7	< 1.0	< 1.0	1.3 G	2.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	17.6	< 25	10.5	< 50	4.1	3.7 C+
cis-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	22.6	17.2 J	56.3	63.9	10.6	4.4 C+
trans-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 10	< 25	1.5	< 50	< 1.0	< 2.0
1,2-Dichloropropane			< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 20	< 50	NT	< 100	< 2.0	< 4.0
1,4-Dioxane			< 25	< 25	NT	< 25	< 25	< 25	< 25	< 25	NT	< 25	< 25	< 25	< 25	< 25	NT	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	NT	< 250	< 630	NT	< 1300	< 25	< 50
Ethylbenzene			< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 10	< 25	NT	< 50	< 1.0	< 2.0
2-Hexanone			< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 50	< 130	NT	< 250	< 5.0	< 10
4-Isopropyltoluene			< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 50	< 130	NT	< 250	< 5.0	< 10
Methyl tert-butyl ether			12.2	12.1	NT	252	78.0	4.9	< 1.0	< 1.0	NT	< 1.0	0.21 J	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	3.5	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 10	< 25	NT	< 50	0.45 J	< 2.0
Methylene chloride			< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 20	31.4 J	NT	< 100	< 2.0	< 4.0
Naphthalene			< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 50	< 130	NT	< 250	< 5.0	< 10
Tert-amyl methyl ether			< 2.0	< 2.0	NT	< 2.0	2.2	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 20	< 50	NT	< 100	< 2.0	< 4.0
1,1,1,2-Tetrachloroethane			< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 50	< 130	NT	< 250	< 5.0	< 10
Tetrachloroethylene (PCE)			1.0 F-	1.2	2.3	1.7	2.3	0.44 J	< 1.0 F-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 F-	< 1.0	< 1.0	0.60 J	< 1.0	< 1.0	178 F-	28.5	17.4	0.89 J F-	0.93 J	NT	13700 F-	7370	6340	8350	3100	1160 C+
Tetrahydrofuran			< 10	< 10	NT	< 10	< 10	< 10	< 10	< 10	NT	< 10	< 10	< 10	< 10	< 10	NT	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	NT	< 100	< 250	NT	< 500	< 10	< 20
Toluene			< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	110	0.40 J	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 10	< 25	NT	< 50	< 1.0	< 2.0
1,1,1-Trichloroethane (TCA)			15.3	1.5 J+	6.4	11.3	14.9	2.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.77 J	0.97 J	0.31 J	< 1.0	< 1.0	NT	142	56.5	89.1	84.1	41.3	17.6 C+
1,1,2-Trichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 10	< 25	< 1.0	< 50	< 1.0	< 2.0
Trichloroethylene (TCE)			3.7	4.8	3.6	4.4	4.9	1.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4.5	< 1.0	0.52 J	< 1.0	< 1.0	NT	150	84.4	120	125	42.1	19.9 C+
Vinyl chloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 10	< 25	< 1.0	< 50	< 1.0	< 2.0
m,p-Xylene			< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 10	< 25	NT	< 50	< 1.0	< 2.0
o-Xylene			< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 10	< 25	NT	< 50	< 1.0	< 2.0
Total Xylene			< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 10	< 25	NT	< 50	< 1.0	< 2.0
Metals (Total)	6010B	µg/l		NT	NT	NT	NT	NT		NT	NT	NT	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT
Arsenic			< 10						< 10						< 10									2.9								
Iron			319						6160						< 100									84000								
Manganese			NT						NT						NT									NT								
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																																
Others				NT	NT	NT	NT	NT		NT	NT	NT	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l	< 10						4.13 J						0.18 J									< 10		NT						
Ethane	8015	µg/l	< 10						< 10						< 10									< 10		NT						
Ethylene	8015	µg/l	< 10						< 10						< 10									< 10		NT						
Alkalinity	E310.1	µg/l	83100						174000						71100									122000		NT						
Chloride	E325.3	µg/l	1870000						100000						235000									142000		1010000						
Iron, Ferrous	3500FE B	µg/l	NT						NT						NT									NT		NT						
Nitrate & Nitrite as N	E353.2	µg/l	12900						100						< 100									2400		NT						
Nitrogen, Nitrate	E353.2	µg/l	12800						< 110						< 110									2300		NT						
Nitrogen, Nitrite	E354.1	µg/l	83						< 10						< 10									54		NT						
Sodium	6010C	µg/l	NT						NT						NT									NT		NT						
Sulfate	E375.4	µg/l	86800						33400						28100									47700		NT						
Surfactants	E425.1	µg/l	< 100						150						< 100									< 100		NT						
Total Organic Carbon	E415.1	µg/l	1300						12200						1300									5700		NT						

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:

B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 2-2. Chemical Testing Results - Groundwater
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

Sample Location:			MW112A																														
Sample Name:			MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW900 (FD)	MW112A	MW901 (FD)	MW112A	MW900 (FD)	MW112A	MW901 (FD)	MW112A	MW901 (FD)	MW112A	MW900 (FD)	MW112A	MW900 (FD)	MW112A	MW900 (FD)	MW112A	MW112A	MW900 (FD)	MW112A	MW112A	MW900 (FD)	MW112A	MW112A	MW112A	MW112A
Well Screen Interval (ft bgs):			4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19
Sample Date:			3/23/07	4/16/07	7/18/07	10/10/07	1/10/08	4/17/08	7/14/08	7/14/08	10/22/08	10/22/08	1/12/09	1/12/09	4/13/09	4/13/09	7/14/09	7/14/09	10/14/09	10/14/09	4/12/10	4/12/10	10/27/10	4/20/11	4/20/11	11/16/11	4/16/12	4/16/12	11/12/12	4/24/13	4/24/13	11/18/13	6/11/14
Collected By:			GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																															
Volatile Organic Compounds (VOCs)																																	
Acetone	8260	µg/l	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 F+	< 5.0 F+	< 5.0	< 5.0	< 5.0 J+	< 5.0 J+	< 5.0	< 10	< 10	< 5.0	< 5.0 K-	< 5.0 K-	< 10 K-	< 20	< 20	< 10 K-	< 10 K-
Benzene			< 0.50	< 0.50	NT	< 0.50	0.34 J	< 0.50	< 0.50	< 0.50	< 0.50	0.26 J	0.27 J	0.36 J	0.28 J	< 0.50 F-	< 0.50 F-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 1.0	< 0.50	< 0.50
Bromodichloromethane			< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0
2-Butanone (MEK)			< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 5.0	< 5.0	< 5.0	< 10 K-	< 10	< 10	< 5.0	< 5.0
Carbon disulfide			< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 5.0	< 5.0	< 5.0	< 10	< 10	< 10	< 5.0	< 5.0
Carbon tetrachloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0
Chlorobenzene			< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0
Chloroethane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 4.0	< 2.0	< 2.0
Chloroform			0.35 J	< 1.0	NT	< 1.0	0.32 J	< 1.0	< 1.0	< 1.0	< 1.0	0.23 J	0.24 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0
Chloromethane			< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 J+	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 4.0	< 2.0	< 2.0
1,4-Dichlorobenzene			< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0
1,1-Dichloroethane			27.6	24.0	6.4	35.6	114	40.9 C+	31.5	31.2	43.7	44.6	70.9	70.7	109	89.6	99.3	107	137	142	83.8	88.3	85.5	38.1	38.8	39.5	71.5	69.0	48.1	24.2	37.0	73.5	18.3
1,2-Dichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0
1,1-Dichloroethylene			19.7	10.8	6.7	19.7	82.4	36.6 C+	24.5	24.5	39.1	39.3	61.7	61.7	89.2	73.0	91.4	97.7	123	130	74.9	78.6	89.1	57.9	53.0	47.6	86.4	76.2	57.3	30.2	30.0	86.5	38.5
cis-1,2-Dichloroethylene			< 1.0	0.54 J	0.98 J	4.2	18.7	55.3 C+	81.5	80.9	214	212	225	224	296	247	311	380	390	373	165	196	214	143	140	169	178	185	150	145	112	209	150
trans-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	7.9 G	2.5 G	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	5.9	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	2.9	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane			< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 4.0	< 2.0	< 2.0
1,4-Dioxane			< 25	< 25	NT	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 50	< 50	< 25	< 25	< 25	< 50	< 50	< 50	< 25	< 25
Ethylbenzene			< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0
2-Hexanone			< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 5.0	< 5.0	< 5.0	< 10	< 10	< 10	< 5.0 K-	< 5.0
4-Isopropyltoluene			< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 5.0	< 5.0	< 5.0	< 10	< 10	< 10	< 5.0	< 5.0
Methyl tert-butyl ether			10.8	13.8	NT	20.3	87.0	20.5 C+	14.9	13.5	32.4	32.2	33.3	32.9	29.9	23.3	41.4	46.0	77.5	81.4	15.9	20.3	50.3	9.2	9.1	22.3	27.1	26.2	28.8	19.0	14.1	64.6	4.6
Methylene chloride			< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 4.0	< 2.0	< 2.0
Naphthalene			< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 5.0	< 5.0	< 5.0	< 10	< 10	< 10	< 5.0	< 5.0
Tert-amyl methyl ether			< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 4.0	< 2.0	< 2.0
1,1,1,2-Tetrachloroethane			< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 5.0	< 5.0	< 5.0	< 10	< 10	< 10	< 5.0	< 5.0
Tetrachloroethylene (PCE)			261	198	144	159	359	202 C+	165	164	226	228	287	290	290 G	384	359	360	393	405	481	477	561	415	409	363	569 R	604	546	339	581	371	266
Tetrahydrofuran			< 10	< 10	NT	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10 F+	< 10 F+	< 10	< 10	< 10	< 10	< 10	< 20	< 20	< 10	< 10	< 10	< 20 F- K-	< 20	< 20	< 10	< 10
Toluene			0.54 J	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0
1,1,1-Trichloroethane (TCA)			1.3	0.96 J	0.68 J	1.4	5.8	1.9 C+	1.3	1.2	5.6	5.7	3.3	3.2	3.9	3.1	3.8	4.0	4.2 J+	4.4 J+	3.4	3.4	4.3	7.5	< 2.0	3.3	5.3	4.8	4.1	4.3	6.5	8.0	1.5
1,1,2-Trichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0
Trichloroethylene (TCE)			34.0	36.1	26.7	61.3	142	72.8 C+	46.1	44.3	54.9	55.9	88.2	87.9	140	114	137	139	194	198.0	173	179	181	110	108	95.0	171	157	138	87.0	140	146	82.0
Vinyl chloride			0.84 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.42 J	0.43 J	< 1.0	< 1.0	1.2	1.3	1.0	1.5	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	4.4	0.90 J	< 1.0
m,p-Xylene			< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0
o-Xylene			< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0
Total Xylene			< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic																					NT			NT			NT						NT
Iron																					< 0.10 J+			NT			< 100			14200			NT
Manganese																					875			1570			954			1610			1470
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																																	
Others			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
Methane	8015	µg/l																			0.18 J B			< 0.30			0.66			0.10 J			< 10
Ethane	8015	µg/l																			< 0.10			< 0.10			< 0.10			< 0.10			< 10
Ethylene	8015	µg/l																			< 0.10			< 0.10			< 0.10			< 0.10			< 10
Alkalinity	E310.1	µg/l																			233000			252000			245000			278000			285000
Chloride	E325.3	µg/l																			810000			915000			655000			857000			815000
Iron, Ferrous	3500FE B	µg/l																			NT			NT			NT			NT			< 100
Nitrate & Nitrite as N	E353.2	µg/l																			4700			3500			2600			1300			650
Nitrogen, Nitrate	E353.2	µg/l																			4700			3500			2600			1300			650
Nitrogen, Nitrite	E354.1	µg/l																			11			< 10			< 10			< 10			< 10
Sodium	6010C	µg/l																			NT			NT			NT			NT			NT
Sulfate	E375.4	µg/l																			57100			52200			66100			68000			90900
Surfactants	E425.1	µg/l																			< 100			< 100			< 100			< 100			< 10
Total Organic Carbon	E415.1	µg/l																			1200			1100			< 1000			1500			< 1000

General Notes:
1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:
B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 2-2. Chemical Testing Results - Groundwater
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

Sample Location:			MW112A (cont)			MW113										MW114						MW115						MW116						
Sample Name:			MW112A	MW112A	MW900 (FD)	MW113	MW113	MW113	MW900 (FD)	MW113	MW900 (FD)	MW113	MW900 (FD)	MW113	MW900 (FD)	MW114	MW114	MW114	MW114	MW114	MW114	MW115	MW115	MW115 R	MW115	MW115	MW115 R	MW116	MW116	MW116	MW901 (FD)	MW116	MW901 (FD)	MW116
Well Screen Interval (ft bgs):			4 to 19	4 to 19	4 to 19	10 to 20	10 to 20	10 to 20	10 to 20	10 to 20	10 to 20	10 to 20	10 to 20	10 to 20	10 to 20	7 to 17	7 to 17	7 to 17	10 to 20	7 to 17	7 to 17	10 to 25	10 to 25	10 to 25	10 to 25	10 to 25	10 to 25	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15
Sample Date:			11/18/14	4/17/15	4/17/15	2/20/07	4/12/07	7/18/07	7/18/07	10/10/07	10/10/07	1/11/08	1/11/08	4/15/08	4/15/08	2/20/07	4/13/07	7/18/07	10/10/07	1/11/08	4/17/08	3/23/07	4/13/07	7/18/07	10/10/07	1/9/08	4/17/08	3/23/07	4/16/07	7/18/07	7/18/07	10/12/07	10/12/07	1/11/08
Collected By:			GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																																
Volatile Organic Compounds (VOCs)																																		
Acetone	8260	µg/l	< 10	< 10	< 10	< 5.0	3.8 J	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	2.1 J	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	NT	< 10 J+	< 10 J+	< 5.0
Benzene			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NT	NT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NT	< 0.50	< 0.50	< 0.50	0.24 J	< 0.50	NT	NT	< 1.0	< 1.0	< 0.50
Bromodichloromethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	1.1 J	0.99 J	< 1.0
2-Butanone (MEK)			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	NT	< 10 J+	< 10 J+	< 5.0
Carbon disulfide			< 5.0	< 5.0	< 5.0	< 5.0	0.66 J	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	NT	< 10	< 10	< 5.0
Carbon tetrachloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0
Chlorobenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 2.0	< 2.0	< 1.0
Chloroethane			< 2.0 G	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2.4	2.3	2.4 J	2.4 J	< 2.0
Chloroform			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 2.0	< 2.0	< 1.0
Chloromethane			< 2.0 G	< 2.0	< 2.0	< 2.0	< 2.0	NT	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	NT	< 4.0	< 4.0	< 2.0
1,4-Dichlorobenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 2.0	< 2.0	< 1.0
1,1-Dichloroethane			64.1 G K-	23.2	25.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	135	4.4	97.3	96.9	80.1	79.3	18.9
1,2-Dichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0
1,1-Dichloroethylene			109 K+	39	42.9	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.43 J	0.33 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	107	2.7	33.8	34.0	24.8	22.4	14.7
cis-1,2-Dichloroethylene			321	71.1	84.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	103	21.7	415	431	346	341	49.5
trans-1,2-Dichloroethylene			< 1.0 K+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.8	< 1.0	4.3	4.4	2.5	2.4	0.88 J
1,2-Dichloropropane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	NT	< 4.0	< 4.0	< 2.0
1,4-Dioxane			< 25	< 25	< 25	< 25	< 25	NT	NT	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	NT	< 25	< 25	< 25	< 25 J+	< 25	NT	< 25	< 25	< 25	< 25	< 25	NT	NT	< 50	< 50	< 25
Ethylbenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 2.0	< 2.0	< 1.0
2-Hexanone			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	NT	< 10 J+	< 10 J+	< 5.0
4-Isopropyltoluene			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	NT	< 10	< 10	< 5.0
Methyl tert-butyl ether			47.3 K+	11.9	13.9	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	12.3	0.40 J	NT	NT	12.5	12.7	2.1 J+
Methylene chloride			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	NT	< 4.0	< 4.0	< 2.0
Naphthalene			< 5.0	< 5.0	< 5.0	< 5.0	1.2 J	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	NT	< 10	< 10	< 5.0
Tert-amyl methyl ether			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	NT	< 4.0	< 4.0	< 2.0
1,1,1,2-Tetrachloroethane			< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	NT	< 10	< 10	< 5.0
Tetrachloroethylene (PCE)			398	303	300	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.84 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1180	32.2	167	168	116	110	267
Tetrahydrofuran			< 10	< 10	< 10	< 10	< 10	NT	NT	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	NT	< 10	< 10	< 10	< 10	< 10	NT	< 10	< 10	< 10	30.6	13.8	NT	NT	< 20	< 20	< 10
Toluene			< 1.0	< 1.0	< 1.0	0.44 J	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.34 J	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 2.0	< 2.0	< 1.0
1,1,1-Trichloroethane (TCA)			3.6	1.3	1.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	21.6	0.67 J	10.6	10.7	9.4	9.2	3.3
1,1,2-Trichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0
Trichloroethylene (TCE)			117	71	73	< 1.0	0.82 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	358	19.4	72.7	73.2	136	129	66.3
Vinyl chloride			0.77 J G K-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	14.1	3.2	185	182	84.9	76.4	3.1
m,p-Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 2.0	< 2.0	< 1.0
o-Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 2.0	< 2.0	< 1.0
Total Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 2.0	< 2.0	< 1.0
Metals (Total)	6010B	µg/l	NT		NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic				NT																														
Iron				NT																														
Manganese				909																														
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																																		
Others			NT		NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l		< 10																														
Ethane	8015	µg/l		< 10																														
Ethylene	8015	µg/l		< 10																														
Alkalinity	E310.1	µg/l		266000																														
Chloride	E325.3	µg/l		700000																														
Iron, Ferrous	3500FE B	µg/l		< 100																														
Nitrate & Nitrite as N	E353.2	µg/l		1200																														
Nitrogen, Nitrate	E353.2	µg/l		1200																														
Nitrogen, Nitrite	E354.1	µg/l		< 0.1																														
Sodium	6010C	µg/l		NT																														
Sulfate	E375.4	µg/l		63100																														
Surfactants	E425.1	µg/l		< 100																														
Total Organic Carbon	E415.1	µg/l		< 5000																														

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:

B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 2-2. Chemical Testing Results - Groundwater
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

		Sample Location:	MW116 (cont)																				MW117D								
		Sample Name:	MW901 (FD)	MW116	MW901 (FD)	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW901 (FD)	MW116	MW901 (FD)	MW116	MW901 (FD)	MW116	MW901 (FD)	MW116	MW900 (FD)	MW116	MW900 (FD)	MW117D	MW117D	MW117D	MW117D	MW117D	MW117D	MW117D	MW117D	MW117D
		Well Screen Interval (ft bgs):	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	60 to 70	60 to 70	60 to 70	60 to 70	60 to 70	60 to 70	60 to 70	60 to 70	60 to 70
		Sample Date:	1/11/08	4/15/08	4/15/08	7/16/08	10/21/08	1/14/09	4/15/09	7/14/09	10/14/09	4/13/10	4/13/10	4/21/11	4/21/11	4/17/12	4/17/12	4/24/13	4/24/13	5/1/14	5/1/14	4/2/15	4/2/15	7/19/07	10/11/07	1/15/08	4/16/08	7/16/08	10/21/08	1/13/09	4/14/09	7/15/09
		Collected By:	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																													
Volatile Organic Compounds (VOCs)																															
Acetone	8260	µg/l	< 5.0 J+	< 5.0	< 5.0	< 10	< 5.0	< 10	< 5.0	< 10 F+	< 10	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 20	< 10	< 20	< 20	< 20	< 20	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0
Benzene			< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	< 1.0	< 0.50	< 1.0	< 1.0	< 2.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane			< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)			< 5.0 J+	< 5.0	< 5.0	< 10	< 5.0	< 10	< 5.0	< 10	< 10	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 10	< 10	< 10	< 10	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon disulfide			< 5.0	< 5.0	< 5.0	2.9 J	< 5.0	< 10	< 5.0	< 10	< 10	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 10	< 10	< 10	< 10	NT	< 5.0	< 5.0	6.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon tetrachloride			< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene			< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane			< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Chloroform			< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane			< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0	< 4.0	< 4.0	NT	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dichlorobenzene			< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0 J+	< 2.0 J+	< 2.0	< 5.0	< 1.0	1.6	1.0	0.82 J	0.77 J	< 2.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane			15.6	66.8	64.5	114	109	72.5	101	69.7	92.2	63.9	68.9	27.8	23.4	52.8	51.8	31.5	25.8	38.5	41.9	52.0	49.9	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane			< 1.0	0.23 J	0.20 J	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethylene			11.8	46.3	45.7	78.4	79.8	56.5	70.6	35.2	68.8	49.1	51.9	22.4	14.1	43.3	42.3	26.7	39.4	46.1	50.3	52.4	50.8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethylene			42.9	105	102	286	319	146	84.1	92.7	133	80.7	92.1	84.6	68.3	115	112	94.8	144	107	116	114	111	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethylene			1.3	< 1.0	< 1.0	< 2.0	1.3	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	1.6	1.6	1.8	< 1.0	< 1.0	< 2.0	1.1	< 2.0	< 2.0	1.1 J	<2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane			< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0	< 4.0	< 4.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dioxane			< 25	< 25	< 25	< 50	< 25	< 50	< 25	< 50 F-	< 50	< 130	< 25	< 25	< 25	< 25 K-	< 25 K-	< 100	< 50	< 50	< 50	< 50	< 50	NT	< 25	< 25	< 25	< 25	< 25	< 25 J+	< 25 J+	< 25
Ethylbenzene			< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Hexanone			< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 10	< 5.0	< 10	< 10	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 10	< 10	< 10	< 10	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
4-Isopropyltoluene			< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 10	< 5.0 J+	< 10 J+	< 10	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 10	< 10	< 10	< 10	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Methyl tert-butyl ether			1.3 J+	7.1	6.9	18.2	18.0	9.0	11.7	7.2	8.4	5.4	5.9	4.4	4.4	3.4	3.3	14.1	10.6 K-	4.4	4.8	5.0	4.9	NT	1.6	2.3	1.5	< 1.0	1.5	0.96 J	0.86 J	1.3
Methylene chloride			< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0	< 4.0	< 4.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Naphthalene			0.68 J	< 5.0	< 5.0	< 10	< 5.0	< 10	< 5.0 J+	< 10 J+	< 10	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 10	< 10	< 10	< 10	NT	< 5.0	4.9 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+
Tert-amyl methyl ether			< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0 K-	< 4.0	< 4.0	< 4.0	< 4.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,1,1,2-Tetrachloroethane			< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 10	< 5.0	< 10	< 10	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tetrachloroethylene (PCE)			257 J+	603	607	864	839	795	796 G	1020	1010	860	933	323	166	774	778	527	396	618	670	726	695	0.54 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrahydrofuran			< 10	< 10	< 10	< 20	< 10	< 20	< 10	< 20 F+	< 20	< 50	< 10	< 10	< 10	< 10	< 10	< 20	< 10	13.3 J	15.7 J	<20	<20	NT	< 10	< 10	< 10	< 10	< 10	< 10	< 10 J+	< 10
Toluene			< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	0.98 J	< 1.0	0.34 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane (TCA)			2.5	10.7	10.7	16.0	15.6	12.8	16.6	8.5	14.3 J+	8.2	10.2	4.2	3.8	8.0	8.3	6.0	3.0	6.7	7.3	8.0	7.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane			< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene (TCE)			53.6	175	174	257	269	229	341	196	267	195	212	88.7	57.7	181	182	126	95.4	164	182	188	183	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride			2.3	2.6	2.7	7.2	21.3	13.9	6.3	6.1	6.9	5.7	6.1	13.5	9.0	8.8 K+	8.8 K+	3.8	< 1.0	1.8 J	2.2	3.8	3.8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m,p-Xylene			1.2	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene			< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylene			1.2	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic																																
Iron																																
Manganese																																
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																																
Others			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l																														
Ethane	8015	µg/l																														
Ethylene	8015	µg/l																														
Alkalinity	E310.1	µg/l																														
Chloride	E325.3	µg/l																														
Iron, Ferrous	3500FE B	µg/l																														
Nitrate & Nitrite as N	E353.2	µg/l																														
Nitrogen, Nitrate	E353.2	µg/l																														
Nitrogen, Nitrite	E354.1	µg/l																														
Sodium	6010C	µg/l																														
Sulfate	E375.4	µg/l																														
Surfactants	E425.1	µg/l																														
Total Organic Carbon	E415.1	µg/l																														

General Notes:
1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:
B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 2-2. Chemical Testing Results - Groundwater
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

		Sample Location:	MW117D (cont)							MW117S															MW117T						
		Sample Name:	MW117D	MW117D	MW117D	MW117D	MW117D	MW117D	MW117D	MW117S	MW117S	MW117S	MW117S	MW117S	MW117S	MW117S	MW117S	MW117S	MW117S	MW117S	MW117S	MW117S	MW117S	MW117S	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T
		Well Screen Interval (ft bgs):	60 to 70	60 to 70	60 to 70	60 to 70	60 to 70	60 to 70	60 to 70	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45
		Sample Date:	10/14/09	4/13/10	4/20/11	4/16/12	4/24/13	5/1/14	4/2/15	7/18/07	10/15/07	1/11/08	4/16/08	7/16/08	10/21/08	1/13/09	4/14/09	7/15/09	10/14/09	4/13/10	4/21/11	4/16/12	4/24/13	5/1/14	4/2/15	7/19/07	10/11/07	1/15/08	4/16/08	7/16/08	10/21/08	1/13/09
		Collected By:	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																													
Volatile Organic Compounds (VOCs)																															
Acetone	8260	µg/l	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 10	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 10	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+
Benzene			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0
Carbon disulfide			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon tetrachloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Chloroform			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.3	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0
1,4-Dichlorobenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dioxane			< 25	< 25	< 25	< 25	< 25	< 25	< 25	NT	< 25	< 25	< 25	< 25	< 25	< 25 J+	< 25 J+	< 25	< 25	< 25	< 25	< 25	< 50	< 25	< 25	NT	< 25	< 25	< 25	< 25	< 25	< 25 J+
Ethylbenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Hexanone			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
4-Isopropyltoluene			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Methyl tert-butyl ether			1.5	1.2	< 1.0	< 1.0	6.8	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 K-	< 1.0	< 1.0	NT	3.4	9.8	4.8	1.7	2.8	1.9
Methylene chloride			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Naphthalene			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tert-amyl methyl ether			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,1,1,2-Tetrachloroethane			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<1.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<1.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tetrachloroethylene (PCE)			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrahydrofuran			< 10	< 10	< 10	< 10	< 10	< 10	< 10	NT	< 10	< 10	< 10	< 10	< 10	< 10	< 10 J+	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	NT	< 10	< 10	< 10	< 10	< 10	< 10
Toluene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane (TCA)			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene (TCE)			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m,p-Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic																															
Iron																															
Manganese																															
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																															
Others			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l																													
Ethane	8015	µg/l																													
Ethylene	8015	µg/l																													
Alkalinity	E310.1	µg/l																													
Chloride	E325.3	µg/l																													
Iron, Ferrous	3500FE B	µg/l																													
Nitrate & Nitrite as N	E353.2	µg/l																													
Nitrogen, Nitrate	E353.2	µg/l																													
Nitrogen, Nitrite	E354.1	µg/l																													
Sodium	6010C	µg/l																													
Sulfate	E375.4	µg/l																													
Surfactants	E425.1	µg/l																													
Total Organic Carbon	E415.1	µg/l																													

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:

B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 2-2. Chemical Testing Results - Groundwater
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

Sample Location:			MW117T (cont)									MW118D																				
Sample Name:			MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW118D	MW118D	MW118D	MW118D	MW118D	MW118D	MW118D	MW118D	MW118D	MW118D	MW901 (FD)	MW118D	MW118D	MW118D	MW118D	MW118D	MW118D	MW118D	MW118D	MW118D	MW118D
Well Screen Interval (ft bgs):			35 to 45	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80
Sample Date:			4/14/09	7/15/09	10/16/09	4/13/10	4/21/11	4/16/12	4/23/13	5/1/14	4/2/15	7/20/07	8/30/07	10/11/07	1/16/08	4/16/08	7/16/08	10/21/08	1/14/09	4/14/09	7/15/09	10/14/09	10/14/09	4/12/10	4/20/11	4/16/12	11/12/12	4/24/13	11/18/13	5/1/14	11/18/14	4/2/15	11/19/15
Collected By:			GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																														
Volatile Organic Compounds (VOCs)																																
Acetone	8260	µg/l	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 K-	< 10	< 10	< 10	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0 K-	< 10	< 10 K-	< 10	< 10	< 10
Benzene			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NT	NT	< 0.50	0.24 J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)			< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 K-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon disulfide			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	1.6 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon tetrachloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 G	< 2.0	4.8
Chloroform			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	NT	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 G	< 2.0	< 2.0
1,4-Dichlorobenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	20.3	21.4	31.2	31.7	33.3	34.3	22.8	26.0	22.8	28.7	41.2	39.5	40.0	43.5	36.9	41.4	38.5	39.1	40.6	47.9	46.6	39.3
1,2-Dichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.55 J	< 1.0	< 1.0	< 1.0	0.79 J K+	0.90 J	1.6
cis-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.55 J	< 1.0	< 1.0	< 1.0	< 1.0	0.96 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.3	1.2	1.6	2.7	5.1	6.5	6.8	6.9	5.6
trans-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.74 J	0.68 J	< 1.0 K+	0.62 J	2.2
1,2-Dichloropropane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dioxane			< 25	< 25	< 25	< 25	< 25	< 25	< 50	< 25	< 25	NT	NT	< 25	< 25	< 25	< 25	< 25	< 25	< 25 J+	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 50	< 50	< 25	< 25	< 25	< 25
Ethylbenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Hexanone			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 K-	< 5.0	< 5.0	< 5.0	< 5.0
4-Isopropyltoluene			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	0.93 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Methyl tert-butyl ether			4.1	1.5	7.0	1.6	1.4	< 1.0	< 1.0 K-	< 1.0	< 1.0	NT	NT	< 1.0	0.40 J	< 1.0	0.40 J	< 1.0	< 1.0	0.38 J	0.39 J	0.55 J	0.51 J	< 1.0	0.83 J	< 1.0	0.63 J	< 1.0	0.46 J	< 1.0	1.9 K+	0.69 J	0.89 J
Methylene chloride			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Naphthalene			< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	1.1 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tert-amyl methyl ether			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,1,1,2-Tetrachloroethane			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<1.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0
Tetrachloroethylene (PCE)			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	7.0	8.4	8.2	6.1	5.7	7.1	2.1	1.2	< 1.0	2.3	0.93 J	1.1	1.5	4.6	8.4	4.3	5.8	1.3	< 1.0	2.2	5.1	39.7
Tetrahydrofuran			< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	NT	NT	NT	< 10	< 10	< 10	< 10	< 10	< 10 J+	< 10	< 10	< 10	< 10	< 10	< 10	< 10 F- K-	< 10	< 10	< 10	< 10	< 10	< 10
Toluene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	0.62 J	< 1.0	0.27 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane (TCA)			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene (TCE)			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.2	3.9	1.8	0.94 J	1.0	1.9	< 1.0	1.9	1.5	3.0	6.1	6.3	10.0	11.9	7.4	11.5	7.7	7.3	4.3	6.9	4.6	17.6
Vinyl chloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 G K-	< 1.0	1.9
m,p-Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic																																
Iron																																
Manganese																																
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																																
Others			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l																														
Ethane	8015	µg/l																														
Ethylene	8015	µg/l																														
Alkalinity	E310.1	µg/l																														
Chloride	E325.3	µg/l																														
Iron, Ferrous	3500FE B	µg/l																														
Nitrate & Nitrite as N	E353.2	µg/l																														
Nitrogen, Nitrate	E353.2	µg/l																														
Nitrogen, Nitrite	E354.1	µg/l																														
Sodium	6010C	µg/l																														
Sulfate	E375.4	µg/l																														
Surfactants	E425.1	µg/l																														
Total Organic Carbon	E415.1	µg/l																														

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:

B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 2-2. Chemical Testing Results - Groundwater
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

		Sample Location:	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T
		Sample Name:	MW118S 3 to 14 7/20/07 GEI	MW118S 3 to 14 8/30/07 GEI	MW118S 3 to 14 10/11/07 GEI	MW118S 3 to 14 1/11/08 GEI	MW118S 3 to 14 4/16/08 GEI	MW118S 3 to 14 7/15/08 GEI	MW118S 3 to 14 10/21/08 GEI	MW118S 3 to 14 1/14/09 GEI	MW118S 3 to 14 4/15/09 GEI	MW118S 3 to 14 7/15/09 GEI	MW118S 3 to 14 10/14/09 GEI	MW118S 3 to 14 4/12/10 GEI	MW118S 3 to 14 4/20/11 GEI	MW118S 3 to 14 4/24/13 GEI	MW118S 3 to 14 5/1/14 GEI	MW118S 3 to 14 4/2/15 GEI	MW118T 39.5 to 49.5 7/20/07 GEI	MW118T 39.5 to 49.5 8/30/07 GEI	MW118T 39.5 to 49.5 10/11/07 GEI	MW118T 39.5 to 49.5 1/15/08 GEI	MW118T 39.5 to 49.5 4/16/08 GEI	MW118T 39.5 to 49.5 7/15/08 GEI	MW118T 39.5 to 49.5 10/21/08 GEI	MW118T 39.5 to 49.5 1/14/09 GEI	MW118T 39.5 to 49.5 4/14/09 GEI	MW118T 39.5 to 49.5 7/14/09 GEI	MW118T 39.5 to 49.5 10/15/09 GEI	MW118T 39.5 to 49.5 4/12/10 GEI	MW118T 39.5 to 49.5 4/20/11 GEI
		Well Screen Interval (ft bgs):																													
		Sample Date:																													
		Collected By:																													
Analyte	**Method**	**Units**																													
Volatile Organic Compounds (VOCs)																															
Acetone	8260	µg/l	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 10	< 10	< 10	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0
Benzene			NT	NT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50 J+	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NT	NT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane			NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)			NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon disulfide			NT	NT	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon tetrachloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene			NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Chloroform			NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane			NT	NT	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	NT	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dichlorobenzene			NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	35.4	34.4	44.2	42.3	42.0	41.9	37.0	33.4	33.6	40.0	53.3 J+	37.8	35.9
1,2-Dichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.45 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane			NT	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dioxane			NT	NT	< 25	< 25	< 25	< 25	< 25	< 25	< 25 J+	< 25	< 25	< 25	< 25	< 50	< 25	< 25	NT	NT	< 25	< 25	< 25 J+	< 25	< 25	< 25	< 25 J+	< 25	< 25	< 25
Ethylbenzene			NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Hexanone			NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
4-Isopropyltoluene			NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	21.9	< 5.0	2.9 J	6.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Methyl tert-butyl ether			NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	2.4	3.1	2.2	2.5	2.2	2.3	2.0	1.9	7.5	1.2	2.4
Methylene chloride			NT	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Naphthalene			NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tert-amyl methyl ether			NT	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0
1,1,1,2-Tetrachloroethane			NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<1.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tetrachloroethylene (PCE)			0.39 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.29 J	3.0	3.8	2.2	2.9	2.7	2.5	2.4	2.1	2.0	1.7	2.8	1.6	2.1
Tetrahydrofuran			NT	NT	< 10	< 10	< 10	< 10	< 10	< 10	< 10 J+	< 10	< 10	< 10	< 10	< 10	< 10	< 10	NT	NT	< 10	< 10	< 10 J+	< 10	< 10	< 10	< 10 J+	< 10	< 10	< 10	< 10
Toluene			NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane (TCA)			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene (TCE)			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.31 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.50 J	0.80 J	< 1.0	< 1.0
Vinyl chloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m,p-Xylene			NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene			NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylene			NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic																															
Iron																															
Manganese																															
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																															
Others			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l																													
Ethane	8015	µg/l																													
Ethylene	8015	µg/l																													
Alkalinity	E310.1	µg/l																													
Chloride	E325.3	µg/l																													
Iron, Ferrous	3500FE B	µg/l																													
Nitrate & Nitrite as N	E353.2	µg/l																													
Nitrogen, Nitrate	E353.2	µg/l																													
Nitrogen, Nitrite	E354.1	µg/l																													
Sodium	6010C	µg/l																													
Sulfate	E375.4	µg/l																													
Surfactants	E425.1	µg/l																													
Total Organic Carbon	E415.1	µg/l																													

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:

B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 2-2. Chemical Testing Results - Groundwater
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

		Sample Location:	MW118T (cont)				MW119S																MW119T							
		Sample Name:	MW118T	MW118T	MW118T	MW118T	MW119S	MW119S	MW119S	MW119S	MW119S	MW119S	MW119S	MW119S	MW119S	MW119S	MW119S	MW119S	MW119S	MW119S	MW119S	MW119S	MW119T	MW119T	MW119T	MW119T	MW119T	MW119T	MW119T	MW119T
		Well Screen Interval (ft bgs):	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	42 to 47	42 to 47	42 to 47	42 to 47	42 to 47	42 to 47	42 to 47	42 to 47
		Sample Date:	4/17/12	4/24/13	5/1/14	4/3/15	8/22/07	10/12/07	1/15/08	4/16/08	7/15/08	10/22/08	1/13/09	4/13/09	7/15/09	10/15/09	4/13/10	4/22/11	4/16/12	4/23/13	5/1/14	4/2/15	8/22/07	10/12/07	1/16/08	4/16/08	7/15/08	10/22/08	1/13/09	4/13/09
		Collected By:	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																												
Volatile Organic Compounds (VOCs)																														
Acetone	8260	µg/l	< 5.0	< 10	< 10	< 10	< 5.0 J+	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	6.4 K-	< 10	< 10	< 10	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0
Benzene			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50 J+	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon disulfide			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon tetrachloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Chloroform			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	9.2 J+	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dichlorobenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane			28.8	26.9	28.4	31.3	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	10.4 J+	11.0	10.9	10.4	11.0	5.3	9.0	9.1
1,2-Dichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.0 J+	6.4	6.0	6.2	5.8	< 1.0	5.1	5.0
cis-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	0.45 J	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.54 J J+	1.2	1.1	1.2	1.1	< 1.0	0.20 J	1.0
trans-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dioxane			< 25	< 50	< 25	< 25	< 25 J+	< 25	< 25	< 25	< 25	< 25	< 25 J+	< 25	< 25	< 25	< 25	< 25	< 25	< 50	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25 J+	< 25
Ethylbenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Hexanone			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
4-Isopropyltoluene			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Methyl tert-butyl ether			1.8	7.1	0.94 J	1.5	5.2 J+	2.0	2.1	0.83 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 K-	< 1.0	< 1.0	4.1 J+	0.66 J	0.64 J	0.50 J	< 1.0	< 1.0	0.47 J	0.37 J
Methylene chloride			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Naphthalene			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tert-amyl methyl ether			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,1,1,2-Tetrachloroethane			< 5.0	< 5.0	< 5.0	<1.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tetrachloroethylene (PCE)			2.1	1.5	1.0	1.3	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.5	< 1.0	< 1.0	< 1.0	< 1.0	94.3 J+	105	85.0	86.3	81.2	17.5	78.8	72.2
Tetrahydrofuran			< 10	< 10	< 10	< 10	< 10 J+	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Toluene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane (TCA)			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.69 J	0.52 J	2.6	< 1.0	< 1.0	0.46 J	< 1.0
1,1,2-Trichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene (TCE)			< 1.0	< 1.0	< 1.0	0.26 J	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	25.9 J+	29.6	26.7	26.8	26.7	6.7	24.9	23.7
Vinyl chloride			< 1.0 K+	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m,p-Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic																														
Iron																														
Manganese																														
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																														
Others			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l																												
Ethane	8015	µg/l																												
Ethylene	8015	µg/l																												
Alkalinity	E310.1	µg/l																												
Chloride	E325.3	µg/l																												
Iron, Ferrous	3500FE B	µg/l																												
Nitrate & Nitrite as N	E353.2	µg/l																												
Nitrogen, Nitrate	E353.2	µg/l																												
Nitrogen, Nitrite	E354.1	µg/l																												
Sodium	6010C	µg/l																												
Sulfate	E375.4	µg/l																												
Surfactants	E425.1	µg/l																												
Total Organic Carbon	E415.1	µg/l																												

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:

B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 2-2. Chemical Testing Results - Groundwater
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

Sample Location:			MW119T (cont)								MW120D															MW120S				
Sample Name:			MW119T	MW119T	MW119T	MW119T	MW119T	MW119T	MW119T	MW119T	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120S	MW120S	MW120S	MW1120S	MW120S
Well Screen Interval (ft bgs):			42 to 47	42 to 47	42 to 47	42 to 47	42 to 47	42 to 47	42 to 47	42 to 47	28 to 38	28 to 38	28 to 38	28 to 38	28 to 38	28 to 38	28 to 38	28 to 38	28 to 38	28 to 38	28 to 38	28 to 38	28 to 38	28 to 38	28 to 38	28 to 38	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20
Sample Date:			7/15/09	10/15/09	4/13/10	4/22/11	4/16/12	4/23/13	5/1/14	5/1/14	8/22/07	10/12/07	1/17/08	4/16/08	7/15/08	10/22/08	1/13/09	4/14/09	7/15/09	10/15/09	4/13/10	4/22/11	4/16/12	4/23/13	5/1/14	4/3/15	8/22/07	10/12/07	1/15/08	4/16/08	7/15/08
Collected By:			GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																												
Volatile Organic Compounds (VOCs)																														
Acetone	8260	µg/l	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 K-	< 10	< 10	< 10	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 K-	< 10	< 10	< 10	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0
Benzene			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0
Carbon disulfide			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	0.56 J J+	< 5.0	< 5.0	< 5.0	< 5.0
Carbon tetrachloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Chloroform			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.9 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane			< 2.0	1.4 J	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	12.0 J+	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	0.85 J	< 2.0	< 2.0	10.3 J+	< 2.0	< 2.0	< 2.0 J+	< 2.0
1,4-Dichlorobenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane			7.7	10.8 J+	10.2	9.4	6.4	5.9	5.6	5.9	23.0 J+	26.0	23.2	30.8	29.5	21.8	21.4	20.9	18.4	31.1 J+	25.1	23.1	17.0	15.8	16.2	16.2	1.1 J+	4.3	< 1.0	< 1.0	2.5
1,2-Dichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethylene			4.6	6.1 J+	5.4	7.0	4.4	4.2	4.1	4.5	15.6 J+	18.9	14.3	17.8	22.0	18.4	16.7	16.9	14.1	24.7 J+	19.4	23.8	15.5	14.8	16.7	16.8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethylene			0.66 J	0.94 J J+	< 1.0	< 1.0	0.95 J	0.80 J	< 1.0	0.70 J	0.70 J J+	< 1.0	1.7	1.9	1.9	1.6	0.70 J	1.6	1.5	1.8 J+	1.7	2.4	1.4	1.1	< 1.0	0.95 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dioxane			< 25	< 25	< 25	< 25	< 25	< 50	< 25	< 25	< 25	< 25	< 25 J+	< 25	< 25	< 25	< 25 J+	< 25 J+	< 25	< 25	< 25	< 25	< 25	< 50	< 25	< 25	< 25	< 25	< 25	< 25	< 25
Ethylbenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Hexanone			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0
4-Isopropyltoluene			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Methyl tert-butyl ether			0.34 J	< 1.0	< 1.0	< 1.0	< 1.0	9.1 K-	1.5	0.98 J	6.8 J+	3.9	3.2	4.2	3.8	6.6	2.8	2.4	2.0	7.5	2.2	2.2	1.4	7.1 K-	0.78 J	1.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methylene chloride			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Naphthalene			< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	0.68 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tert-amyl methyl ether			< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,1,1,2-Tetrachloroethane			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tetrachloroethylene (PCE)			85.8	72.5	85.4	74.6	75.1	68.5	56.4	54.5	93.5 J+	120	113	131	103	118	84.2	114	99.3	95.0	95.9	75.0	78.5	72.0	66.4	52.9	< 1.0	< 1.0	0.97 J	< 1.0	< 1.0
Tetrahydrofuran			< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10 J+	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Toluene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane (TCA)			0.54 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.1	10.3 J+	4.3	3.2	< 1.0	3.9	6.4	2.8	3.7	2.5	3.3	3.5	4.3	2.0	2.6	1.7	2.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene (TCE)			26.4	23.0	27.1	23.2	21.0	21.3	16.8	20.2	32.6 J+	40.1	34.7	43.4	38.7	33.2	30.4	33.8	32.0	33.1	34.8	28.3	26.1	23.6	22.1	21.4	< 1.0	< 1.0	0.39 J	< 1.0	< 1.0
Vinyl chloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.38 J	0.35 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.43 J	< 1.0	< 1.0	1.6	< 1.0	< 1.0	< 1.0	0.89 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m,p-Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic																															
Iron																															
Manganese																															
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																															
Others			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l																													
Ethane	8015	µg/l																													
Ethylene	8015	µg/l																													
Alkalinity	E310.1	µg/l																													
Chloride	E325.3	µg/l																													
Iron, Ferrous	3500FE B	µg/l																													
Nitrate & Nitrite as N	E353.2	µg/l																													
Nitrogen, Nitrate	E353.2	µg/l																													
Nitrogen, Nitrite	E354.1	µg/l																													
Sodium	6010C	µg/l																													
Sulfate	E375.4	µg/l																													
Surfactants	E425.1	µg/l																													
Total Organic Carbon	E415.1	µg/l																													

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:

B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 2-2. Chemical Testing Results - Groundwater
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

Sample Location:			MW120S (conti)											MW121D																	
Sample Name:			MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW121D	MW121D	MW121D	MW121D	MW901	MW121D	MW900 (FD)	MW121D	MW901 (FD)	MW121D	MW900 (FD)	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D
Well Screen Interval (ft bgs):			5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1
Sample Date:			10/22/08	1/13/09	4/14/09	7/15/09	10/15/09	4/13/10	4/22/11	4/16/12	4/23/13	5/1/14	4/3/15	10/22/07	1/15/08	4/17/08	7/14/08	7/14/08	10/22/08	10/22/08	1/12/09	1/12/09	4/13/09	4/13/09	7/14/09	7/14/09	10/14/09	4/12/10	4/20/11	4/16/12	
Collected By:			GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																													
Volatile Organic Compounds (VOCs)																															
Acetone	8260	µg/l	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	4.2 J K-	< 10	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 F+	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0 K-	
Benzene			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3.3
2-Butanone (MEK)			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon disulfide			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon tetrachloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Chloroform			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 J+	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dichlorobenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane			< 1.0	< 1.0	< 1.0	0.36 J	< 1.0	< 1.0	< 1.0	0.52 J	< 1.0	< 1.0	< 1.0	46.3	55.3	46.6	37.2	38.1	36.1	34.2	38.2	38.3	37.2	38.1	37.6	37.9	54.8	52.9	65.8	67.7
1,2-Dichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	13.2	< 1.0	16.7	12.8	12.6	12.9 G	8.4 G	14.0	14.2	14.1	14.2	11.0	10.4	21.8	18.0	24.1	25.5
cis-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3.9	11.8	6.4	21.8	22.6	83.7 G	41.2 G	134	138	80.0	78.4	105	106	253	279	217	178
trans-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.70 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	5.8	< 1.0
1,2-Dichloropropane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dioxane			< 25	< 25 J+	< 25 J+	< 25	< 25	< 25	< 25	< 25	< 50	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25
Ethylbenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Hexanone			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
4-Isopropyltoluene			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Methyl tert-butyl ether			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 K-	< 1.0	< 1.0	3.0	3.8	2.4	2.1	2.0	5.6	5.6	1.8	1.8	1.7	1.9	1.4	1.4	< 1.0	0.94 J	2.0	1.7
Methylene chloride			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Naphthalene			< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tert-amyl methyl ether			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,1,1,2-Tetrachloroethane			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tetrachloroethylene (PCE)			0.71 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	182	258	177	157	154	148 G	97.7 G	112	114	121	118	140	139	115	119	219	356
Tetrahydrofuran			< 10	< 10	< 10 J+	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10 F+	< 10	< 10	< 10	< 10	< 10
Toluene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.51 J	1.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane (TCA)			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.2	1.3	1.2	1.1	1.0	4.9	4.6	0.87 J	0.86 J	1.0	< 1.0	0.95 J	1.0	< 1.0	0.62 J	< 1.0	< 1.0
1,1,2-Trichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene (TCE)			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	59.6	136	68.8	71.0	72.0	48.3 G	69.0 G	36.5	36.3	62.3	70.7	76.3	76.5	146.0	96.3	233.0	342
Vinyl chloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.39 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.32 J	0.31 J	< 1.0	< 1.0	0.56 J	0.52 J	< 1.0	< 1.0	7.4	15.2
m,p-Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic																															
Iron																															
Manganese																															
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																															
Others			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l																													
Ethane	8015	µg/l																													
Ethylene	8015	µg/l																													
Alkalinity	E310.1	µg/l																													
Chloride	E325.3	µg/l																													
Iron, Ferrous	3500FE B	µg/l																													
Nitrate & Nitrite as N	E353.2	µg/l																													
Nitrogen, Nitrate	E353.2	µg/l																													
Nitrogen, Nitrite	E354.1	µg/l																													
Sodium	6010C	µg/l																													
Sulfate	E375.4	µg/l																													
Surfactants	E425.1	µg/l																													
Total Organic Carbon	E415.1	µg/l																													

General Notes:
1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:
B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 2-2. Chemical Testing Results - Groundwater
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

Sample Location:			MW121D (cont)							MW121S															MW122						
Sample Name:			MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121S	MW121S	MW121S	MW121S	MW121S	MW121S	MW121S	MW121S	MW121S	MW121S	MW121S	MW121S	MW121S	MW121S	MW121S	MW122	MW122	MW122	MW122	MW122	MW122	MW122
Well Screen Interval (ft bgs):			32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	4 to 16	4 to 16	4 to 16	4 to 16	4 to 16	4 to 16	4 to 16
Sample Date:			11/12/12	4/23/13	11/18/13	4/30/14	11/18/14	4/2/15	11/19/15	10/22/07	1/15/08	4/17/08	7/14/08	10/22/08	1/12/09	4/13/09	7/14/09	10/14/09	4/12/10	4/20/11	4/16/12	4/23/13	4/30/14	4/2/15	1/30/08	4/17/08	7/14/08	10/22/08	1/12/09	4/13/09	7/15/09
Collected By:			GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																													
Volatile Organic Compounds (VOCs)																															
Acetone	8260	µg/l	< 5.0 K-	< 10	< 10 K-	< 10	< 10	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 F+	< 5.0	< 5.0 J+	< 5.0	8.2 K-	< 10	< 10	< 10	< 5.0 J+	9.6 J	11.1	7.2	5.7	< 5.0	< 5.0 F-
Benzene			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.5	< 0.5	< 0.5	< 0.50	< 1.0	0.46 J	< 0.50	< 0.50	< 0.50	0.23 J
Bromodichloromethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.1 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)			< 5.0 K-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon disulfide			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	13.4	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 F-
Carbon tetrachloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 G	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 F-
Chloroform			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	0.61 J	< 1.0	< 1.0	< 1.0
Chloromethane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 G	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0 F-
1,4-Dichlorobenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane			49.9	63.4	32.1	45.0	149.0	55.7	35.9	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	19.3	30.4 C+	10.1	15.0	16.0	25.8	21.2
1,2-Dichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethylene			17.6	22.3	12.7	17.6	59.7 K+	23.5	14.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4.0	9.0 C+	1.4	4.4	3.4	6.1	5.3 F-
cis-1,2-Dichloroethylene			122	193	67.2	133	316	186	73.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	60.6	70.7 C+	34.0	62.5	91.5	61.9	39.4
trans-1,2-Dichloroethylene			< 1.0	2.9	< 1.0	1.5	0.57 J K+	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.87 J	< 2.0	< 1.0	< 1.0	< 1.0	0.93 J	< 1.0
1,2-Dichloropropane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dioxane			< 25	< 50	< 50	< 25 K-	< 25 K-	<25	<25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 50	< 25 K-	< 25	< 25	< 50	< 25	< 25	< 25	< 25	< 25
Ethylbenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Hexanone			< 5.0	< 5.0	< 5.0 K-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
4-Isopropyltoluene			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Methyl tert-butyl ether			2.1	8.6 K-	2.7	2.3	7.1 K+	2.1	1.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 K-	< 1.0	< 1.0	3.3	3.9 C+	1.9	5.6	2.5	3.2	3.3
Methylene chloride			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Naphthalene			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.2	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	2.6 J	< 5.0	< 5.0	< 5.0	< 5.0
Tert-amyl methyl ether			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,1,1,2-Tetrachloroethane			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<1.0	<1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tetrachloroethylene (PCE)			223	276	124	163	224	216	216	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	477	691 C+	122	352 G	312	499 G	677
Tetrahydrofuran			< 10 F- K-	< 10	< 10	< 10 G	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10 F+	< 10	< 10	< 10	< 10	< 10	< 10 G	< 10	< 10	< 20	< 10	< 10	< 10	< 10	< 10
Toluene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	6.5	<1.0	0.48 J	< 2.0	2.8	3.7	0.64 J	2.4	1.6
1,1,1-Trichloroethane (TCA)			< 1.0	< 1.0	< 1.0	0.53 J	0.44 J	1.4	0.56 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.4	3.4 C+	0.63 J	5.1	1.1	1.7	1.7
1,1,2-Trichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene (TCE)			207	342	115	236	432	266	148	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	177	106 C+	27.0	56.9	59.6	91.7	90.2
Vinyl chloride			8.5	10.2	3.4	9.5	38.4 G K-	15	7.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.32 J	< 2.0	< 1.0	< 1.0	1.2	< 1.0	< 1.0 F-
m,p-Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	0.92 J	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	0.67 J	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	1.6 J	< 1.0	< 1.0	< 1.0	< 1.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic																															
Iron																															
Manganese																															
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																															
Others			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l																													
Ethane	8015	µg/l																													
Ethylene	8015	µg/l																													
Alkalinity	E310.1	µg/l																													
Chloride	E325.3	µg/l																													
Iron, Ferrous	3500FE B	µg/l																													
Nitrate & Nitrite as N	E353.2	µg/l																													
Nitrogen, Nitrate	E353.2	µg/l																													
Nitrogen, Nitrite	E354.1	µg/l																													
Sodium	6010C	µg/l																													
Sulfate	E375.4	µg/l																													
Surfactants	E425.1	µg/l																													
Total Organic Carbon	E415.1	µg/l																													

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:

B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 2-2. Chemical Testing Results - Groundwater
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

Sample Location:			MW122 (cont)													MW201				MW202									
Sample Name:			MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW201	MW201	MW201	MW201	MW202	MW202	MW202	MW202	MW202	MW202	MW202	MW202	MW202	MW202
Well Screen Interval (ft bgs):			4 to 16	4 to 16	4 to 16	4 to 16	4 to 16	4 to 16	4 to 16	4 to 16	4 to 16	4 to 16	4 to 16	4 to 16	4 to 16	11 to 21	11 to 21	11 to 21	11 to 21	10.5 to 20.5	10.5 to 20.5	10.5 to 20.5	10.5 to 20.5	10.5 to 20.5	10.5 to 20.5	10.5 to 20.5	10.5 to 20.5	10.5 to 20.5	10.5 to 20.5
Sample Date:			10/14/09	4/12/10	10/27/10	4/20/11	11/16/11	4/17/12	11/12/12	4/23/13	11/18/13	4/30/14	11/18/14	4/2/15	11/19/15	7/19/07	10/12/07	1/11/08	4/15/08	7/19/07	10/12/07	1/11/08	4/15/08	7/15/08	10/21/08	1/13/09	4/15/09	7/14/09	10/14/09	4/12/10
Collected By:			GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																											
Volatile Organic Compounds (VOCs)																													
Acetone	8260	µg/l	< 10	3.8 J+	< 5.0	17.8	< 5.0	< 5.0	< 25 K-	< 50	< 50 K-	< 20	< 20	< 20	< 10	NT	< 5.0 J+	< 5.0	< 5.0	NT	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0 J+
Benzene			< 1.0	< 0.50	< 0.50	< 1.0	< 0.50	< 0.50	< 2.5	< 2.5	< 2.5	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 0.50	< 0.50	< 0.50	NT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50 J+	< 0.50	< 0.50	< 0.50
Bromodichloromethane			< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)			< 10	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 25 K-	< 25	< 25	< 10	< 10	< 10	17.3 J	NT	< 5.0 J+	< 5.0	< 5.0	NT	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon disulfide			< 10	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 25	< 25	< 25	< 10	< 10	< 10	< 10	NT	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon tetrachloride			< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0
Chlorobenzene			< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane			< 4.0	< 2.0	< 2.0	< 4.0	< 2.0	< 2.0	< 10	< 10	< 10	< 4.0	< 4.0 G	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Chloroform			0.75 J	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	0.47 J	0.40 J	0.24 J	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.89 J
Chloromethane			< 4.0	< 2.0	< 2.0	< 4.0	< 2.0	< 2.0	< 10	< 10	< 10	< 4.0	< 4.0 G	< 4.0	< 4.0	NT	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dichlorobenzene			< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane			20.8	29.6	20.3	19.1	15.2	17.2	14.4	11.1	12.7	15.9	12.8	15.0	6.8	< 1.0	0.66 J	< 1.0	0.23 J	0.50 J	< 1.0	< 1.0	< 1.0	0.46 J	< 1.0	< 1.0	0.34 J	< 1.0	3.1	5.0
1,2-Dichloroethane			< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0
1,1-Dichloroethylene			6.6	7.3	4.6	8.3	4.1	6.4	4.7 J	4.1 J	4.4 J	5.1	3.8 K+	4.5	1.6 J	4.7	4.9	5.2	3.0	1.1	< 1.0	< 1.0	< 1.0	2.9	2.8	1.6	1.9	3.2	< 1.0	< 1.0
cis-1,2-Dichloroethylene			109.0	58.6	117	45.5	66.4	61.5	84.7	56.2	67.2	68.0	69.3	43.8	75.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethylene			< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0 K+	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane			< 4.0	< 2.0	< 2.0	< 4.0	< 2.0	< 2.0	< 10	< 10	< 10	< 4.0	< 4.0	< 4.0	< 4.0	NT	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0
1,4-Dioxane			< 50	< 25	< 25	< 50	< 25	< 25 K-	< 130	< 260	< 260	< 50 K-	< 50 K-	< 50	< 50	NT	< 25	< 25	< 25	NT	< 25	< 25	< 25	< 25	< 25	< 25	< 25 J+	< 25 J+	< 25	< 25
Ethylbenzene			< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Hexanone			< 10	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 25	< 25	< 25 K-	< 10	< 10	< 10	< 10	NT	< 5.0 J+	< 5.0	< 5.0	NT	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
4-Isopropyltoluene			< 10	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 25	< 25	< 25	< 10	< 10	< 10	< 10	NT	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0
Methyl tert-butyl ether			2.9	2.3	2.7	2.9	2.1	2.7	2.2 J	< 5.0 K-	< 5.0	1.5 J	2.6 K+	1.8	1.0 J	NT	75.8	240	0.26 J	NT	< 1.0	< 1.0	< 1.0	1.2	< 1.0	< 1.0	0.92 J	< 1.0	< 1.0	< 1.0
Methylene chloride			< 4.0	< 2.0	< 2.0	< 4.0	< 2.0	< 2.0	< 10	< 10	< 10	< 4.0	< 4.0	< 4.0	1.1 J	NT	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Naphthalene			< 10	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 25	< 25	< 25	< 10	< 10	< 10	< 10	NT	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0
Tert-amyl methyl ether			< 4.0	< 2.0	< 2.0	< 4.0	< 2.0	< 2.0	< 10	< 10	< 10	< 4.0	< 4.0	< 4.0	< 4.0	NT	4.6	17.7	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,1,1,2-Tetrachloroethane			< 10	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 25	< 25	< 25	< 10	< 10	<2.0	<2.0	NT	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tetrachloroethylene (PCE)			518	856	532	656	581	1000	811	938	726	592	499	784	326	5.1	19.6	25.8	18.0	17.2	14.6	21.8	55.6	48.5	39.4	37.5	53.5	52.6	61.8	84.9
Tetrahydrofuran			< 20	< 10	< 10	< 20	< 10	< 10	< 50 F- K-	< 50	< 50	< 20 G	< 20	< 20	< 20	NT	< 10	< 10	< 10	NT	< 10	< 10	< 10	< 10	< 10	< 10	< 10 J+	< 10	< 10	< 10
Toluene			< 4.0	6.0	< 1.0	< 2.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 2.0	0.79 J	0.72	< 2.0	NT	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0
1,1,1-Trichloroethane (TCA)			< 2.0	1.5	< 1.0	7.5	1.4	2.2	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	2.0	< 2.0	9.8	36.3	32.9	7.3	12.5	4.4	4.2	35.2	18.9	7.1	8.0	15.7	6.6	14.3 J+	16.8
1,1,2-Trichloroethane			< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0
Trichloroethylene (TCE)			81.1	119.0	82.1	73.1	79.0	103	88.0	93.4	76.0	98.9	58.9	82.9	44.9	4.5	7.2	8.2	6.4	2.2	1.5	1.6	6.9	8.6	5.3	5.6	11.8 J+	7.2	9.8	12.9
Vinyl chloride			4.3	< 1.0	3.6	< 2.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0 K-	1.8	1.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m,p-Xylene			< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene			< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylene			< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic																														
Iron																														
Manganese																														
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																														
Others			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l																												
Ethane	8015	µg/l																												
Ethylene	8015	µg/l																												
Alkalinity	E310.1	µg/l																												
Chloride	E325.3	µg/l																												
Iron, Ferrous	3500FE B	µg/l																												
Nitrate & Nitrite as N	E353.2	µg/l																												
Nitrogen, Nitrate	E353.2	µg/l																												
Nitrogen, Nitrite	E354.1	µg/l																												
Sodium	6010C	µg/l																												
Sulfate	E375.4	µg/l																												
Surfactants	E425.1	µg/l																												
Total Organic Carbon	E415.1	µg/l																												

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:

B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 2-2. Chemical Testing Results - Groundwater
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

Sample Location:			MW202 (cont)					MW203		MW-3												MW- CS1	SH-1	SH-3	SH-4	SH-MW1				
Sample Name:			MW202	MW202	MW202	MW202	MW202	MW203	MW203	MW-3	MW-3	MW-3	MW-3	MW3	MW3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-CS1	SH-1	SH-3	SH-4	SH-MW1	SH-MW-1	SH-MW-1	SH-MW1	SHMW1
Well Screen Interval (ft bgs):			10.5 to 20.5	10.5 to 20.5	10.5 to 20.5	10.5 to 20.5	10.5 to 20.5	6 to 18	6 to 18	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	9 to 14	8 to 13	11 to 16	10 to 30	10 to 30	10 to 30	10 to 30	10 to 30
Sample Date:			4/22/11	4/17/12	4/23/13	5/1/14	4/2/15	7/19/07	4/15/08	7/1/02	8/9/04	5/23/06	1/17/07	4/17/07	4/15/08	7/15/08	10/21/08	1/14/09	4/14/09	7/15/09	10/16/09	5/23/07	8/9/04	8/9/04	5/25/06	7/8/02	5/23/06	10/4/06	1/16/07	4/12/07
Collected By:			GEI	GEI	GEI	GEI	GEI	GEI	GEI	SHA	GeoInsight	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GeoInsight	GeoInsight	GEI	SHA	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																												
Volatile Organic Compounds (VOCs)																														
Acetone	8260	µg/l	< 5.0	< 5.0	< 10	< 10	< 10	NT	< 250	< 2500	< 2000	< 5.0	< 5.0	< 130	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 4000	< 2000	30.0	< 2500	< 5.0	< 5.0	< 5.0	< 5.0
Benzene			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NT	< 25	< 250	< 100	0.37 J	0.71	< 13	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 200	< 100	< 0.50	< 250	< 0.50	0.61	< 0.50	0.33 J
Bromodichloromethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 50	< 250	< 100	< 1.0	< 1.0	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	< 1.0	< 250	< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 250	< 2500	< 1000	< 5.0	< 5.0	< 130	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 2000	< 1000	< 5.0	< 2500	< 5.0	< 5.0	< 5.0	< 5.0
Carbon disulfide			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 250	< 2500	< 5.0	< 5.0	< 5.0	< 130	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	0.54 J	< 1000	< 5.0	< 5.0	< 2500	< 5.0	< 5.0	< 5.0	< 5.0
Carbon tetrachloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 50	< 250	< 100	< 1.0	< 1.0	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	< 1.0	< 250	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 50	< 250	< 100	< 1.0	0.52 J	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	< 1.0	< 250	< 1.0	0.52 J	< 1.0	< 1.0
Chloroethane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 100	< 5.0	< 200	< 2.0	< 2.0	< 50	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 400	< 200	< 2.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0
Chloroform			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 50	< 380	< 100	2.1	3.4	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	13.3	< 380	2.1	4.6	1.7	3.4
Chloromethane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 100	< 1200	< 200	< 2.0	< 2.0	< 50	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 400	< 200	< 2.0	< 1200	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dichlorobenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 50	< 1200	< 100	< 1.0	< 1.0	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	< 1.0	< 1200	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane			1.1	< 1.0	< 1.0	< 1.0	< 1.0	22.2	13.0 J	< 380	< 100	< 1.0	< 1.0	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	15.9	< 380	11.4	12.0	8.5	12.7
1,2-Dichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 50	< 250	< 100	< 1.0	< 1.0	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	103	< 250	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethylene			15.5	< 1.0	2.4	0.93 J	0.92 J	76.4	36.6 J	< 250	< 100	6.9	5.6	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	556 E	< 250	11.7	19.3	9.0	24.4
cis-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	102	78.9	< 250	< 100	< 1.0	1.9	< 25	< 1.0	< 1.0	0.56 J	< 1.0	< 1.0	< 1.0	0.43 J	2.3 J+	< 1.0	< 200	< 100	16.6	< 250	2.1	7.3	11.2	2.7
trans-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.2	< 50	< 380	< 100	< 1.0	< 1.0	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	< 1.0	< 380	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 100	< 880	< 100	< 2.0	< 2.0	< 50	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 200	< 100	< 2.0	< 880	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dioxane			< 25	< 25 K-	< 50	< 50	<25	NT	< 1300	NT	NT	< 25	< 25	< 630	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	NT	NT	57700	NT	< 25	< 25 R	< 25	< 25
Ethylbenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 50	< 250	< 100	< 1.0	< 1.0	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	< 1.0	< 250	< 1.0	< 1.0	< 1.0	< 1.0
2-Hexanone			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 250	< 2500	< 1000	< 5.0	< 5.0	< 130	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2000	< 1000	5.3	NT	< 5.0	< 5.0	< 5.0	< 5.0
4-Isopropyltoluene			11.3	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 250	< 250	< 100	< 5.0	< 5.0	< 130	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200	< 100	< 5.0	< 250	< 5.0	< 5.0	< 5.0	< 5.0
Methyl tert-butyl ether			< 1.0	< 1.0	< 1.0 K-	< 1.0	< 1.0	NT	< 50	< 5.0	< 100	< 1.0	< 1.0	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	66.4	< 200	< 100	< 1.0	< 5.0	< 1.0	0.71 J J+	< 1.0	0.74 J J+
Methylene chloride			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 100	< 2500	< 1000	< 2.0	< 2.0	71.5	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2000	< 1000	12.2	< 2500	< 2.0	< 2.0	< 2.0	< 2.0
Naphthalene			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 250	< 1200	< 100	< 5.0	< 5.0	< 130	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 200	< 5.0	< 5.0	< 1200	< 5.0	< 5.0	< 5.0	< 5.0
Tert-amyl methyl ether			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 100	NT	NT	< 2.0	< 2.0	< 50	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 J+	< 2.0	NT	NT	1.9 J	NT	< 2.0	< 2.0	< 2.0	< 2.0
1,1,1,2-Tetrachloroethane			< 5.0	< 5.0	< 5.0	< 5.0	<1.0	NT	< 250	< 250	< 100	1.9 J	4.4 J	< 130	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200	< 100	40.4	< 250	< 5.0	< 5.0	< 5.0 F+	< 5.0
Tetrachloroethylene (PCE)			86.5	20.6	37.0	31.4	28.1	15500	11500	16000	16200	22100	51900	6550	400	427	606	176	141	280	391	< 1.0	49700	19500	7240	21000	16200	28300	31700 F+	48900
Tetrahydrofuran			< 10	< 10	< 10	< 10	< 10	NT	< 50	NT	NT	< 10	< 10	< 250	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	NT	NT	< 10	NT	< 10	< 10	< 10	< 10
Toluene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 50	< 380	< 100	0.62 J	< 1.0	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	1.8	< 380	0.61 J	0.47 J	< 1.0	0.36 J
1,1,1-Trichloroethane (TCA)			18.6	2.8	5.2	6.9	7.4	1710	988	< 250	< 100	39.1	68.7	11.1 J	< 1.0	0.43 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1150	2070	7610	< 250	34.5	69.7 J+	31.4	27.9 J+
1,1,2-Trichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.66 J	< 50	< 380	< 100	< 1.0	< 1.0	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	172	< 380	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene (TCE)			8.2	1.5	2.5	1.5	1.4	979	618	< 250	< 100	86.6	247	13.8 J	1.9	3.5	4.2	1.3	1.3	2.7	3.6	< 1.0	906	1440	7580	< 5.0	141	317	141	159
Vinyl chloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 50	< 5.0	< 100	< 1.0	< 1.0	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	0.55 J
m,p-Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 50	< 250	< 200	< 1.0	< 1.0	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 400	< 200	< 1.0	< 250	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 50	< 250	< 100	< 1.0	< 1.0	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	< 1.0	< 250	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 50	ND	ND	< 1.0	< 1.0	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	ND	ND	< 1.0	ND	< 1.0	< 1.0	< 1.0	< 1.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic																														
Iron																														
Manganese																														
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																														
Others			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l																				NT								
Ethane	8015	µg/l																				NT								
Ethylene	8015	µg/l																				NT								
Alkalinity	E310.1	µg/l																				NT								
Chloride	E325.3	µg/l																				275000								
Iron, Ferrous	3500FE B	µg/l																				NT								
Nitrate & Nitrite as N	E353.2	µg/l																				NT								
Nitrogen, Nitrate	E353.2	µg/l																				NT								
Nitrogen, Nitrite	E354.1	µg/l																				NT								
Sodium	6010C	µg/l																				NT								
Sulfate	E375.4	µg/l																				NT								
Surfactants	E425.1	µg/l																				NT								
Total Organic Carbon	E415.1	µg/l																				NT								

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:

B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 2-2. Chemical Testing Results - Groundwater
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

		Sample Location:	SH-MW2							SH-MW3													COBBLE-IR-1
		Sample Name:	SH-MW2	SH-MW2	SH-MW-2	SH-MW-2	SH-MW2	SHMW2	SH-MW2	SH-MW3	SH-MW-3	SH-MW-3	SH-MW3	SHMW3	SHMW3	SHMW3	SHMW3	SHMW3	SH-MW3	SH-MW3	SH-MW3	SH-MW3	SH-MW3	COBBLE-IR-1
		Well Screen Interval (ft bgs):	10 to 25	10 to 25	10 to 25	10 to 25	10 to 25	10 to 25	10 to 25	10 to 24	10 to 24	10 to 24	10 to 24	10 to 24	10 to 24	10 to 24	10 to 24	10 to 24	10 to 24	10 to 24	10 to 24	10 to 24	10 to 24	Unknown
		Sample Date:	7/8/02	8/16/04	5/23/06	10/4/06	1/16/07	4/16/07	7/19/07	7/8/02	5/23/06	10/4/06	1/17/07	4/12/07	4/15/08	4/13/10	4/21/11	4/16/12	4/23/13	4/30/14	4/2/15	6/25/07
		Collected By:	SHA	GeoInsight	GEI	GEI	GEI	GEI	GEI	SHA	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																					
Volatile Organic Compounds (VOCs)																							
Acetone	8260	µg/l	< 250	< 2000	< 5.0	< 5.0	< 5.0	< 10	NT	< 2500	< 5.0	< 5.0	< 500	< 5.0	< 500	< 5.0	< 500	< 250	< 500	< 10	< 500	5.8
Benzene			< 25	< 100	< 0.50	< 0.50	< 0.50	< 1.0	NT	< 250	< 0.50	< 0.50	< 50	< 0.50	< 500	< 0.50	< 50	< 25	< 25	< 0.50	< 25	< 0.50
Bromodichloromethane			< 25	< 100	< 1.0	< 1.0	< 1.0	< 2.0	NT	< 250	< 1.0	< 1.0	< 100	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	0.32 J
2-Butanone (MEK)			< 250	< 1000	< 5.0	< 5.0	< 5.0	< 10	NT	< 2500	< 5.0	< 5.0	< 500	< 5.0	< 500	< 5.0	< 500	< 250	< 250	< 5.0	< 250	< 5.0
Carbon disulfide			< 250	< 5.0	< 5.0	< 5.0	< 5.0	< 10	NT	< 2500	< 5.0	< 5.0	< 500	< 5.0	< 500	< 5.0	< 500	< 250	< 250	< 5.0	< 250	< 5.0
Carbon tetrachloride			< 25	< 100	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 250	< 1.0	< 1.0	< 100	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0
Chlorobenzene			< 25	< 100	< 1.0	< 1.0	< 1.0	< 2.0	NT	< 250	< 1.0	< 1.0	< 100	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0
Chloroethane			< 5.0	< 200	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 5.0	< 2.0	< 2.0	< 200	< 2.0	< 200	< 2.0	< 200	< 100	< 100	< 2.0	< 100	< 2.0
Chloroform			< 38	< 100	< 1.0	< 1.0	< 1.0	< 2.0	NT	< 380	0.88 J	0.81 J	< 100	1.1	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	5.6
Chloromethane			< 120	< 200	< 2.0	< 2.0	< 2.0	< 4.0	NT	< 1200	< 2.0	< 2.0	< 200	< 2.0	< 200	< 2.0	< 200	< 100	< 100	< 2.0	< 100	< 2.0
1,4-Dichlorobenzene			< 120	< 100	< 1.0	< 1.0	< 1.0	< 2.0	NT	< 1200	< 1.0	< 1.0	< 100	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0
1,1-Dichloroethane			< 38	< 100	1.0	20.9	5.7	< 2.0	12.4	< 380	21.6	36.5	< 100	24.5	< 100	19.5	< 100	< 50	< 50	12.6	24.0 J	< 1.0
1,2-Dichloroethane			< 25	< 100	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 250	< 1.0	< 1.0	< 100	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0
1,1-Dichloroethylene			< 25	< 100	10.1	45.0	9.8	2.1	23.8	< 250	91.0	84.4	< 100	91.3	< 100	14.2	< 100	< 50	< 50	12.5	<50	< 1.0
cis-1,2-Dichloroethylene			< 25	< 100	3.9	45.7	14.7	1.4 J	26.1	< 250	37.2	102	< 100	39.8	34.5 J	19.8	< 100	< 50	< 50	40.1	27.7 J	< 1.0
trans-1,2-Dichloroethylene			< 38	< 100	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 380	< 1.0	1.1	< 100	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0
1,2-Dichloropropane			< 88	< 100	< 2.0	< 2.0	< 2.0	< 4.0	NT	< 880	< 2.0	< 2.0	< 200	< 2.0	< 200	< 2.0	< 200	< 100	< 100	< 2.0	< 100	< 2.0
1,4-Dioxane			NT	NT	< 25	< 25 R	< 25	< 5.0	NT	NT	< 25	< 25 R	< 2500	< 25	< 2500	< 25	< 2500	< 1300	< 2600	< 25 K-	<1300	< 25
Ethylbenzene			< 25	< 100	< 1.0	< 1.0	< 1.0	< 2.0	NT	< 250	< 1.0	< 1.0	180	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0
2-Hexanone			NT	< 1000	< 5.0	< 5.0	< 5.0	< 10	NT	NT	< 5.0	< 5.0	< 500	< 5.0	< 500	< 5.0	< 500	< 250	< 250	< 5.0	< 250	< 5.0
4-Isopropyltoluene			< 25	< 100	< 5.0	< 5.0	< 5.0	< 10	NT	< 250	< 5.0	< 5.0	< 500	< 5.0	< 500	< 5.0	< 500	< 250	< 250	< 5.0	< 250	< 5.0
Methyl tert-butyl ether			< 5.0	< 100	< 1.0	8.7 J+	1.4	< 2.0	NT	< 5.0	5.1	8.2 J+	< 100	2.4 J+	< 100	0.83 J	< 100	< 50	< 50 K-	< 1.0	< 50	< 1.0
Methylene chloride			< 250	< 1000	< 2.0	< 2.0	< 2.0	2.3 J	NT	< 2500	< 2.0	< 2.0	< 200	< 2.0	< 200	< 2.0	450	< 100	< 100	< 2.0	< 100	< 2.0
Naphthalene			< 120	< 100	< 5.0	< 5.0	< 5.0	< 10	NT	< 1200	< 5.0	< 5.0	392 J	< 5.0	< 500	< 5.0	< 500	< 250	< 250	< 5.0	< 250	< 5.0
Tert-amyl methyl ether			NT	NT	< 2.0	< 2.0	< 2.0	< 4.0	NT	NT	< 2.0	< 2.0	< 200	< 2.0	< 200	< 2.0	< 200	< 100	< 100	< 2.0	< 100	< 2.0
1,1,1,2-Tetrachloroethane			< 25	< 100	< 5.0	< 5.0	< 5.0 F+	< 10	NT	< 250	< 5.0	< 5.0	< 500	< 5.0	< 500	< 5.0	< 500	< 250	< 250	< 5.0	<50	< 5.0
Tetrachloroethylene (PCE)			2000	7170	1730	7190	2880 F+	726	3320	26000	16900	28300	29700	34000	15200	20300	16900	7310	9650	14500	12800	< 1.0
Tetrahydrofuran			NT	NT	< 10	< 10	< 10	< 20	NT	NT	< 10	< 10	< 1000	< 10	< 1000	< 10	< 1000	< 500	< 500	< 10 G	< 500	< 10
Toluene			< 38	< 100	< 1.0	< 1.0	< 1.0	< 2.0	NT	< 380	< 1.0	< 1.0	< 100	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0
1,1,1-Trichloroethane (TCA)			660	1550	158	1330	360	44.1	539	1200	989	1680	806	621 E J+	119	19.8 J	< 100	83.0	< 50	48.0	49.9 J	< 1.0
1,1,2-Trichloroethane			< 38	< 100	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 380	< 1.0	< 1.0	< 100	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0
Trichloroethylene (TCE)			190	572	92.8	486	171	26.5	354	870	482	1030	709	1030	306	383.0	342	152	157	231	218	< 1.0
Vinyl chloride			< 5.0	< 100	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 5.0	< 1.0	< 1.0	< 100	0.83 J	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0
m,p-Xylene			< 25	< 200	< 1.0	< 1.0	< 1.0	< 2.0	NT	< 250	< 1.0	< 1.0	484	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0
o-Xylene			< 25	< 100	< 1.0	< 1.0	< 1.0	< 2.0	NT	< 250	< 1.0	< 1.0	< 100	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0
Total Xylene			ND	ND	< 1.0	< 1.0	< 1.0	< 2.0	NT	ND	< 1.0	< 1.0	543	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic													< 10										
Iron													255										
Manganese													NT										
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																							
Others			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l											< 10										
Ethane	8015	µg/l											< 10										
Ethylene	8015	µg/l											< 10										
Alkalinity	E310.1	µg/l											208000										
Chloride	E325.3	µg/l											362000										
Iron, Ferrous	3500FE B	µg/l											NT										
Nitrate & Nitrite as N	E353.2	µg/l											1900										
Nitrogen, Nitrate	E353.2	µg/l											1900										
Nitrogen, Nitrite	E354.1	µg/l											30										
Sodium	6010C	µg/l											NT										
Sulfate	E375.4	µg/l											62600										
Surfactants	E425.1	µg/l											< 100										
Total Organic Carbon	E415.1	µg/l											< 1000										

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:

B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 2-3 Chemical Testing Results - 29 Knowlton Street Basement Sump Water Sample
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

			Location Name:	29 KNOWLTON-SUMP
			Sample Name:	29 KNOW-SUMP
			Sample Date:	7/19/2015
Analyte	**Method**	**Units**	**Method 1 Standard GW-2**	
Volatile Organic Compounds (VOCs)	8260C	ug/L		
Acetone			50,000	71.0
Benzene			1,000	0.48 J
2-Butanone			50,000	38.6
p-Isopropyltoluene			NS	38.7
Tetrahydrofuran			NS	44.5
Toluene			50,000	0.30 J

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
2. MCP = 310 CMR 40.0000 Massachusetts Contingency Plan with revisions effective June 20, 2014.
3. Method 1 Standards (e.g., GW-2),where identified, are cited from the MCP.
4. NS = No MCP standard has been established for this analyte.
5. µg/L = micrograms per liter
6. J = The reported result is below the laboratory reporting limit and is estimated.

Table 2-4. Chemical Testing Results - 29 Knowlton Street Indoor Air
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

Sample Location:		29 Knowlton Street																							
Sample Name:		29KNOW-1		29KNOW-B		29KNOW-1		29KNOW-B		29KNOW-1		29KNOW-B		29KNOW-1		29KNOW-B		29KNOW-1		29KNOW-B		29KNOW-1		29KNOW-B	
Sample Date:		6/22/07		6/22/07		2/2/08		2/2/08		7/8/09		7/8/09		3/8/10		3/8/10		10/22/14		10/22/14		7/19/15		7/19/15	
Units:		µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv
Analyte	**Method**																								
Volatile Organic Compounds (VOCs)	TO-15																								
Chloroethane		< 0.53	< 0.20	< 0.53	< 0.20	< 0.53	< 0 .20	< 0.53	< 0.20	< 0.53	< 0.20	< 0.53	< 0.20	< 0.53	< 0.20	< 0.53	< 0.20	NT	NT	NT	NT	NT	NT	NT	NT
Carbon tetrachloride		< 1.3	< 0.20	0.63 J	0.10 J	0.63 J	0.10 J	< 1.3	< 0.20	1.1 J	0.18 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	NT	NT	NT	NT	NT	NT	NT	NT
1,1-Dichloroethane		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
1,1-Dichloroethylene		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
1,2-Dichloroethane		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	NT	NT	NT	NT	NT	NT	NT	NT
trans-1,2-Dichloroethylene		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
cis-1,2-Dichloroethylene		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
1,1,1-Trichloroethane		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
1,1,2,2-Tetrachloroethane		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
1,1,2-Trichloroethane		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Tetrachloroethylene		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethylene		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Vinyl chloride		< 0.51	< 0.20	< 0.51	< 0.20	< 0.51	< 0.20	< 0.51	< 0.20	< 0.51	< 0.20	< 0.51	< 0.20	< 0.51	< 0.20	< 0.51	< 0.20	< 0.51	< 0.20	< 0.51	< 0.20	< 0.51	< 0.20	< 0.51	< 0.20

General Notes:
1. µg/m^3 = micrograms per cubic meter.
2. ppbv = parts per billion by volume.
3. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
4. NT = Not tested.
5. Carbon tetrachloride, chloroethane and 1,2-dichloroethane are not contaminants of concern associated with the 50 Tufts Street disposal site and were not been detected above laboratory reporting limits at 29 Knowlton Street. Therefore, this compound was not analyzed in the October 2014 and July 2015 indoor air samples.

Qualifying Note:
J The reported result is below the laboratory reporting limit and is estimated.

Table 2-5. Summary of Meteorological Data During Air Sampling Events
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

Sample Location	Sample Date	Sample Location	Inside Temperature (ºF)[1,3]		Inside Barometric Pressure (in. Hg)[2,4]		Outside Temperature (ºF)[1,3]		Outside Barometric Pressure (in. Hg)[2,4]		Prevailing Wind Direction		General Weather Conditions		Significant precipitation within 12 hours prior to Sampling?
			Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	
Residences															
29 Knowlton Street	7/18/15 - 7/19/15	B	76.6	74.3	29.94	29.78	65.5	67.8	30.21	30.09	Calm	Calm	Overcast	Cloudy	No
		1	75.7	76.2	29.93	29.77									

General Notes:
1. ºF = degrees Fahrenheit.
2. in. Hg = inches of mercury.
3. Temperatures were measured in the field using a hand-held thermometer.
4. Barometric pressures were measured in the field with a digital barometer.
5. NM = Not Measured.
6. NA = Not Applicable.
7. Samples were collected from the basement (B) and the first floor (1) of each building.

Table 3-1. Summary of SSDS Monitoring Events - Capuano Center
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

Monitoring Date	Monitoring Event per RMR Report Period	Type of Monitoring Event	SSDS Field Parameters Measured	Analytical Samples Collected (Yes/No)?
6/17/2015	1	SSDS Monthly Monitoring	-Pressure readings, VOC concentrations, and flow rate at each manifold pipe. -Pressure readings, VOC concentrations, and flow rate at all the exterior extraction pipes. -Pressure readings and VOC concentrations at all the interior monitoring points.	No
7/30/2015	2	SSDS Quarterly Monitoring	-Pressure readings, VOC concentrations, and flow rate at each manifold pipe. -Pressure readings, VOC concentrations, and flow rate at all the exterior extraction pipes.	No
11/30/2015	3	SSDS Quarterly Monitoring	-Pressure readings, VOC concentrations, and flow rate at each manifold pipe. -Pressure readings, VOC concentrations, and flow rate at all the exterior extraction pipes. -Pressure readings and VOC concentrations at all the interior monitoring points.	No

General Notes:
1. SSDS = Sub-Slab Depressurization System.
2. RMR = Remedial Monitoring Report.
3. VOC = Volatile Organic Compound.
4. VOC measurements collected with a ppm-RAE calibrated to 100 parts per million (ppm) isobutylene.
5. Pressure readings collected using a Dwyer 475-000-FM manometer.

Table 3-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
Capuano Center
150 Glen Street
Somerville, Massachusetts

	Sample Location:	Cafetorium		Room 101				Room 108				Room 121		Room 122						Room 125				Room 126					
	Sample ID:	150 GLEN-CAF		150 GLEN-ROOM 101A		150 GLEN-ROOM 101B		150 GLEN-ROOM 108A		150 GLEN-ROOM 108B		150 GLEN-ROOM 121		150 GLEN-ROOM 122		150 GLEN-RM 122		150 GLEN-RM 122		150 GLEN-ROOM 125A		150 GLEN-ROOM 125B		150 GLEN-ROOM 126		150 GLEN-ROOM 100 (FD-Room 126)		150 GLEN-RM 126	
	Sample Date:	1/6/07		12/27/06		12/28/06		12/27/06		12/28/06		1/6/07		1/6/07		2/7/07		5/23/15		12/27/06		12/28/06		1/13/07		1/13/07		2/7/07	
	Units:	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	**Method**																												
Volatile Organic Compounds (VOCs)	TO-15																												
Carbon tetrachloride		0.49 J J+	0.078 J J+	< 1.3	< 0.20	< 1.3	< 0.20	0.94 J	0.15 J	< 1.3	< 0.20	0.52 J J+	0.082 J J+	0.51 J	0.081 J J+	0.69 J	0.11 J	NT	NT	1.0 J	0.16 J	< 1.3	< 0.20	0.69 J	0.11 J	0.63 J	0.10 J	0.94 J	0.15 J
Dichloroethane,1,1-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	NT	NT	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene,1,1-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		0.88 J J+	0.13 J J+	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	0.88 J	0.13 J	0.75 J	0.11 J	< 1.4	< 0.20
Trichloroethane,1,1,1- (TCA)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. FD = Field Duplicate.
6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.

7 NT = Not Tested.

Qualifying Notes:

J The reported result is below the laboratory reporting limit and is estimated.

J+ The reported result is estimated.

Table 3-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
Capuano Center
150 Glen Street
Somerville, Massachusetts

	Sample Location:	Room 126 (continued)																									
	Sample ID:	150GLEN-ROOM 126		150 GLEN-ROOM 126		150 GLEN-RM 126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126	
	Sample Date:	3/8/07		4/20/07		5/17/07		7/30/07		9/10/07		10/8/07		10/14/07		11/15/07		12/13/07		1/21/08		2/19/08		2/22/08		3/172008		4/21/08	
	Units:	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	**Method**																												
Volatile Organic Compounds (VOCs)	TO-15																												
Carbon tetrachloride		< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.60 J	0.095 J	0.69 J	0.11 J	0.82 J	0.13 J	< 1.3	< 0.20	0.69 J	0.11 J	0.59 J	0.093 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.69 J	0.11 J
Dichloroethane,1,1-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene,1,1-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	1.0 J	0.15 J	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane,1,1,1- (TCA)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. FD = Field Duplicate.
6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.

7 NT = Not Tested.

Qualifying Notes:

J The reported result is below the laboratory reporting limit and is estimated.

J+ The reported result is estimated.

Table 3-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
Capuano Center
150 Glen Street
Somerville, Massachusetts

	Sample Location:	Room 126 (continued)																Room 134						Room 136		Room 137			
	Sample ID:	150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150 GLEN-ROOM 134		150 GLEN-RM 134		150 GLEN-RM 134		150 GLEN-ROOM 136		150 GLEN-ROOM 137A		150 GLEN-ROOM 137B	
	Sample Date:	8/18/08		11/24/08		3/2/09		8/27/09		11/11/09		2/19/10		11/11/10		3/17/11		5/23/15		1/13/07		2/7/07		5/23/15		1/13/07		1/6/07		1/6/07	
	Units:	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	**Method**																												
Volatile Organic Compounds (VOCs)	TO-15																												
Carbon tetrachloride		0.60 J	0.096 J	0.60 J	0.096 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	NT	NT	NT	NT	NT	NT	0.75 J	0.12 J	0.94 J	0.15 J	NT	NT	0.69 J	0.11 J	0.52 J J+	0.082 J J+	< 1.3	< 0.20
Dichloroethane,1,1-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.53	< 0.13	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	NT	NT	NT	NT	NT	NT	< 0.81	< 0.20	< 0.81	< 0.20	NT	NT	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene,1,1-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.52	< 0.13	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.37	< 0.094	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	1.2 J	0.18 J	< 1.4	< 0.20	< 1.4	< 0.20	< 0.82	< 0.12	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 0.95	< 0.14	< 1.4	< 0.20	3.2	0.47	< 1.4	< 0.20	< 1.4	< 0.20	2.1	0.31	< 1.4	< 0.20
Trichloroethane,1,1,1- (TCA)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 0.76	< 0.14	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 0.70	< 0.13	< 1.1	< 0.20	0.54 J	0.10 J	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. FD = Field Duplicate.
6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.
7 NT = Not Tested.

Qualifying Notes:

J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.

Table 3-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
Capuano Center
150 Glen Street
Somerville, Massachusetts

	Sample Location:	Room 138																									
	Sample ID:	RM138		150 GLEN-ROOM 138		150 GLEN-ROOM 138		150 GLEN-ROOM 138		150 GLEN-ROOM 138 (Alpha duplicate)		150 GLEN-RM 138		150 GLEN-RM 139 (FD-Room 138)		150GLEN-ROOM 138		150GLEN-ROOM 139 (FD-Room 138)		150 GLEN-ROOM 138		150GLEN-ROOM 139 (FD-Room 138)		150 GLEN-RM 138		150GLEN-ROOM 139 (FD-Room 138)		150GLEN-RM138	
	Sample Date:	1/2/07		1/6/07		1/13/07		1/26/07		1/26/07		2/7/07		2/7/07		3/8/07		3/8/07		4/20/07		4/20/07		5/17/07		5/17/07		7/30/07	
	Units:	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	**Method**																												
Volatile Organic Compounds (VOCs)	TO-15																												
Carbon tetrachloride		< 1.3	< 0.20	0.49 J J+	0.078 J J+	0.82 J	0.13 J	0.82 J	0.13 J	< 0.126	< 0.020	0.75 J	0.12 J	0.52 J	0.082 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.61 J	0.097 J
Dichloroethane,1,1-		0.45 J	0.11 J	0.77 J J+	0.19 J J+	0.57 J	0.14 J	0.65 J	0.16 J	< 0.081	< 0.020	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.079	< 0.020	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene,1,1-		< 0.79	< 0.20	2.1 J+	0.54 J+	< 0.79	< 0.20	< 0.79	< 0.20	< 0.079	< 0.020	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	0.83 J+	0.21 J+	< 0.79	< 0.20	< 0.79	< 0.20	< 0.0819	< 0.020	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4 J+	< 0.20 J+
Tetrachloroethylene (PCE)		14	2.0	60 J+	8.8 J+	20	3.0	20	3.0	32.6	4.8	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	1.2 J	0.17 J
Trichloroethane,1,1,1- (TCA)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 0.109	< 0.020	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		2.3	0.42	7 J+	1.3 J+	3.1	0.57	3.3	0.61	4.26	0.794	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. FD = Field Duplicate.
6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.

7 NT = Not Tested.

Qualifying Notes:

J The reported result is below the laboratory reporting limit and is estimated.

J+ The reported result is estimated.

Table 3-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
Capuano Center
150 Glen Street
Somerville, Massachusetts

	Sample Location:	Room 138 (continued)																									
	Sample ID:	150GLEN-ROOM 139 (FD-Room 138)		150GLEN-RM138		150GLEN-ROOM 139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM239 (FD-Room 138)		150GLEN-RM238 (FD-Room 138)		150GLEN-RM138		150GLEN-ROOM 139 (FD-Room 138)		150GLEN-RM238 (FD-Room 138)		150GLEN-RM239 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138	
	Sample Date:	7/30/07		9/10/07		9/10/07		10/8/07		10/8/07		10/8/07		10/8/07		10/14/07		10/14/07		10/14/07		10/14/07		11/15/07		11/15/07		12/13/07	
	Units:	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	**Method**																												
Volatile Organic Compounds (VOCs)	TO-15																												
Carbon tetrachloride		0.69 J	0.11 J	0.69 J	0.11 J	0.69 J	0.11 J	0.69 J	0.11 J	0.88 J	0.14 J	0.82 J	0.13 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.59 J	0.094 J	0.62 J	0.099 J	0.69 J	0.11 J	0.69 J	0.11 J	0.57 J	0.091 J
Dichloroethane,1,1-		< 0.81 J+	< 0.20 J+	< 0.81 J+	< 0.20 J+	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2-		< 0.81 J+	< 0.20 J+	< 0.81 J+	< 0.20 J+	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene,1,1-		< 0.79 J+	< 0.20 J+	< 0.79 J+	< 0.20 J+	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79 J+	< 0.20 J+	< 0.79 J+	< 0.20 J+	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-		< 1.4 J+	< 0.20 J+	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		1.1 J	0.16 J	< 1.4 J+	< 0.20 J+	6.5	0.96	< 1.4	< 0.20	1.5	0.22	1.2 J	0.18 J	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane,1,1,1- (TCA)		< 1.1 J+	< 0.20 J+	< 1.1 J+	< 0.20 J+	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1 J+	< 0.20 J+	< 1.1 J+	< 0.20 J+	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. FD = Field Duplicate.
6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.

7 NT = Not Tested.

Qualifying Notes:

J The reported result is below the laboratory reporting limit and is estimated.

J+ The reported result is estimated.

Table 3-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
Capuano Center
150 Glen Street
Somerville, Massachusetts

	Sample Location:	Room 138 (continued)																									
	Sample ID:	150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138	
	Sample Date:	12/13/07		1/21/08		1/21/08		2/19/08		2/19/08		2/22/08		2/22/08		3/17/08		3/17/08		4/21/08		4/21/08		8/18/08		8/18/08		11/24/08	
	Units:	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	**Method**																												
Volatile Organic Compounds (VOCs)	TO-15																												
Carbon tetrachloride		< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.69 J	0.11 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.75 J	0.12 J	0.69 J	0.11 J	0.69 J	0.11 J	0.63 J	0.10 J	0.62 J	0.098 J
Dichloroethane,1,1-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene,1,1-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	1.8	0.27	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane,1,1,1- (TCA)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:
1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. FD = Field Duplicate.
6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.
7 NT = Not Tested.

Qualifying Notes:
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.

Table 3-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
Capuano Center
150 Glen Street
Somerville, Massachusetts

	Sample Location:	Room 138 (continued)																									
	Sample ID:	150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138	
	Sample Date:	11/24/08		3/2/09		3/2/09		8/27/09		8/27/09		11/11/09		11/11/09		2/19/10		2/19/10		11/11/10		11/11/10		3/17/11		3/17/11		5/23/15	
	Units:	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	**Method**																												
Volatile Organic Compounds (VOCs)	TO-15																												
Carbon tetrachloride		0.63 J	0.10 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Dichloroethane,1,1-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.53	< 0.13	< 0.53	< 0.13	< 0.81	< 0.20
Dichloroethane,1,2-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Dichloroethene,1,1-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.52	< 0.13	< 0.52	< 0.13	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.37	< 0.094	< 0.37	< 0.094	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 0.82	< 0.12	< 0.82	< 0.12	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 0.95	< 0.14	< 0.95	< 0.14	< 1.4	< 0.20
Trichloroethane,1,1,1- (TCA)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 0.76	< 0.14	< 0.76	< 0.14	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 0.70	< 0.13	< 0.70	< 0.13	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. FD = Field Duplicate.
6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.

7 NT = Not Tested.

Qualifying Notes:

J The reported result is below the laboratory reporting limit and is estimated.

J+ The reported result is estimated.

Table 3-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
Capuano Center
150 Glen Street
Somerville, Massachusetts

	Sample Location:	Room 141																									
	Sample ID:	150 GLEN-ROOM 141		150GLEN-ROOM 141		150 GLEN-ROOM 141		150 GLEN-RM 141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141	
	Sample Date:	1/6/07		3/8/07		4/20/07		5/17/07		7/30/07		9/10/07		10/8/07		10/14/07		11/15/07		12/13/07		1/21/08		2/19/08		2/22/08		3/17/08	
	Units:	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	**Method**																										
Volatile Organic Compounds (VOCs)	TO-15																										
Carbon tetrachloride		0.45 J J+	0.071 J J+	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3 J+	< 0.20 J+	0.75 J	0.12 J	< 1.3	< 0.20	< 1.3	< 0.20	0.69 J	0.11 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.69 J	0.11 J	< 1.3	< 0.20
Dichloroethane,1,1-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81 J+	< 0.20 J+	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81 J+	< 0.20 J+	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene,1,1-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79 J+	< 0.20 J+	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79 J+	< 0.20 J+	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4 J+	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4 J+	< 0.20 J+	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane,1,1,1- (TCA)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1 J+	< 0.20 J+	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1 J+	< 0.20 J+	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. FD = Field Duplicate.
6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.

7 NT = Not Tested.

Qualifying Notes:

J The reported result is below the laboratory reporting limit and is estimated.

J+ The reported result is estimated.

Table 3-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
Capuano Center
150 Glen Street
Somerville, Massachusetts

	Sample Location:	Room 141 (continued)																Room 142											
	Sample ID:	150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		RM142		150 GLEN-ROOM 142		150 GLEN-RM 142		150GLEN-ROOM 142		150 GLEN-ROOM 142		150 GLEN-RM 142		150GLEN-RM142	
	Sample Date:	4/21/08		8/18/08		11/24/08		3/2/09		8/27/09		2/19/10		11/11/10		3/17/11		1/2/07		1/6/07		2/7/07		3/8/07		4/20/07		5/17/07		7/30/07	
	Units:	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	**Method**																														
Volatile Organic Compounds (VOCs)	TO-15																														
Carbon tetrachloride		0.69 J	0.11 J	0.60 J	0.096 J	0.63 J	0.10 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	NT	NT	NT	NT	< 1.3	< 0.20	0.52 J J+	0.083 J J+	0.82 J	0.13 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.63 J	0.10 J
Dichloroethane,1,1-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.53	< 0.13	1.4	0.35	1.2 J+	0.29 J+	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	NT	NT	NT	NT	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	1.0	0.25
Dichloroethene,1,1-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.52	< 0.13	0.87	0.22	2.5 J+	0.63 J+	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.37	< 0.094	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 0.82	< 0.12	< 1.4	< 0.20	< 1.4 J+	< 0.20 J+	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 0.95	< 0.14	28	4.1	45 J+	6.6 J+	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane,1,1,1- (TCA)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 0.76	< 0.14	< 1.1	< 0.20	0.33 J J+	0.061 J J+	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	0.62 J	0.092 J	0.62 J	0.092 J	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 0.70	< 0.13	3.7	0.69	5.4 J+	1 J+	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. FD = Field Duplicate.
6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.

7 NT = Not Tested.

Qualifying Notes:

J The reported result is below the laboratory reporting limit and is estimated.

J+ The reported result is estimated.

Table 3-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
Capuano Center
150 Glen Street
Somerville, Massachusetts

	Sample Location:	Room 142 (cont)																											
	Sample ID:	150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142	
	Sample Date:	9/10/07		10/8/07		10/14/07		11/15/07		12/13/07		1/21/08		2/19/08		2/22/08		3/17/08		4/21/08		8/18/08		11/24/08		3/2/09		8/27/09		11/11/09	
	Units:	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	**Method**																														
Volatile Organic Compounds (VOCs)	TO-15																														
Carbon tetrachloride		0.75 J	0.12 J	< 1.3	< 0.20	< 1.3	< 0.20	0.69 J	0.11 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.75 J	0.12 J	< 1.3	< 0.20	0.69 J	0.11 J	< 1.3	< 0.20	0.69 J	0.11 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20
Dichloroethane,1,1-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene,1,1-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane,1,1,1- (TCA)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. FD = Field Duplicate.
6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.

7 NT = Not Tested.

Qualifying Notes:

J The reported result is below the laboratory reporting limit and is estimated.

J+ The reported result is estimated.

Table 3-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
Capuano Center
150 Glen Street
Somerville, Massachusetts

	Sample Location:	Room 142 (continued)								Room 144				Room 145		Room 146													
	Sample ID:	150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150 GLEN-ROOM 144		150 GLEN-ROOM 144 (Alpha duplicate)		150 GLEN-ROOM 145		150 GLEN-ROOM 146A		150 GLEN-ROOM 146B		150 GLEN-ROOM 146B (FD-Room 146)		RM146		150 GLEN-ROOM 146		150 GLEN-RM 146		150GLEN-ROOM 146		150 GLEN-ROOM 146	
	Sample Date:	2/19/10		11/11/10		3/17/11		5/23/15		1/13/07		1/13/07		1/6/07		12/27/06		12/28/06		12/28/06		1/2/07		1/6/07		2/7/07		3/8/07		4/20/07	
	Units:	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	**Method**																														
Volatile Organic Compounds (VOCs)	TO-15																														
Carbon tetrachloride		< 1.3	< 0.20	NT	NT	NT	NT	NT	NT	0.88 J	0.14 J	< 3.14	< 0.50	0.45 J J+	0.071 J J+	1.1 J	0.18 J	< 1.3	< 0.20	0.49 J	0.078 J	0.63 J	0.10 J	< 1.3	< 0.20	0.75 J	0.12 J	< 1.3	< 0.20	< 1.3	< 0.20
Dichloroethane,1,1-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.53	< 0.13	< 0.81	< 0.20	< 0.81	< 0.20	< 2.02	< 0.50	< 0.81	< 0.20	10	2.5	3.6	0.88	3.3	0.82	0.53 J	0.13 J	0.57 J J+	0.14 J J+	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2-		< 0.81	< 0.20	NT	NT	NT	NT	NT	NT	< 0.81	< 0.20	< 1.98	< 0.50	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene,1,1-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.52	< 0.13	< 0.79	< 0.20	< 0.79	< 0.20	< 1.98	< 0.50	< 0.79	< 0.20	7.9	2.0	4.0	1.0	3.9	0.99	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.37	< 0.094	< 0.79	< 0.20	< 0.79	< 0.20	< 2.02	< 0.50	< 0.79	< 0.20	3.3	0.83	1.3	0.33	1.2	0.31	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 2.0	< 0.50	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-		< 1.4	< 0.20	< 1.4	< 0.20	< 0.82	< 0.12	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 0.95	< 0.14	< 1.4	< 0.20	4.1	0.61	4.36	0.643	< 1.4	< 0.20	186	27.5	83.4	12.3	85.4	12.6	11	1.6	26 J+	3.8 J+	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane,1,1,1- (TCA)		< 1.1	< 0.20	< 1.1	< 0.20	< 0.76	< 0.14	< 1.1	< 0.20	< 1.1	< 0.20	< 2.72	< 0.50	< 1.1	< 0.20	2.1	0.38	0.82 J	0.15 J	0.71 J	0.13 J	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 0.70	< 0.13	< 1.1	< 0.20	1.3	0.24	< 2.68	< 0.50	< 1.1	< 0.20	37	6.8	10	1.9	11	2.1	1.7	0.32	3.0 J+	0.56 J+	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. FD = Field Duplicate.
6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.

7 NT = Not Tested.

Qualifying Notes:

J The reported result is below the laboratory reporting limit and is estimated.

J+ The reported result is estimated.

Table 3-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
Capuano Center
150 Glen Street
Somerville, Massachusetts

	Sample Location:	Room 146 (continued)																									
	Sample ID:	150 GLEN-RM 146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146	
	Sample Date:	5/17/07		7/30/07		9/10/07		10/8/07		10/14/07		11/15/07		12/13/07		1/21/08		2/19/08		2/22/08		3/17/08		4/21/08		8/18/08		11/24/08	
	Units:	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	**Method**																												
Volatile Organic Compounds (VOCs)	TO-15																												
Carbon tetrachloride		< 1.3	< 0.20	0.62 J	0.099 J	0.82 J	0.13 J	< 1.3	< 0.20	0.58 J	0.092 J	0.69 J	0.11 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.62 J	0.098 J	< 1.3	< 0.20	0.75 J	0.12 J	0.60 J	0.096 J	0.63 J	0.10 J
Dichloroethane,1,1-		< 0.81	< 0.20	< 0.81 J+	< 0.20 J+	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2-		< 0.81	< 0.20	< 0.81 J+	< 0.20 J+	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	0.49 J	0.12 J	< 0.81	< 0.20
Dichloroethene,1,1-		< 0.79	< 0.20	< 0.79 J+	< 0.20 J+	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	< 0.79 J+	< 0.20 J+	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-		< 1.4	< 0.20	< 1.4 +	< 0.20 J+	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	1.0 J	0.15 J	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane,1,1,1- (TCA)		< 1.1	< 0.20	< 1.1 J+	< 0.20 J+	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1 J+	< 0.20 J+	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. FD = Field Duplicate.
6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.

7 NT = Not Tested.

Qualifying Notes:

J The reported result is below the laboratory reporting limit and is estimated.

J+ The reported result is estimated.

Table 3-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
Capuano Center
150 Glen Street
Somerville, Massachusetts

	Sample Location:	Room 146 (continued)														Outside of School by Room 126 Window						Outside of School by Day Care Window					
	Sample ID:	150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150 GLEN-0-1A		150 GLEN-0-1B		150 GLEN-0-1A		150 GLEN-0-2A		150 GLEN-0-2B		150 GLEN-0-2A	
	Sample Date:	3/2/09		8/27/09		11/11/09		2/19/10		11/11/10		3/17/11		5/23/15		12/27/06		12/28/06		1/6/07		12/27/06		12/28/06		1/6/07	
	Units:	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	**Method**																										
Volatile Organic Compounds (VOCs)	TO-15																										
Carbon tetrachloride		< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	NT	NT	NT	NT	NT	NT	< 1.3	< 0.20	< 1.3	< 0.20	0.52 J J+	0.083 J J+	1.1 J	0.17 J	< 1.3	< 0.20	0.52 J J+	0.082 J J+
Dichloroethane,1,1-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.53	< 0.13	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	NT	NT	NT	NT	NT	NT	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene,1,1-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.52	< 0.13	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.37	< 0.094	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 0.82	< 0.12	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 0.95	< 0.14	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane,1,1,1- (TCA)		< 1.1	< 0.20	0.93 J	0.17 J	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 0.76	< 0.14	< 1.1	< 0.20	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 0.70	< 0.13	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. FD = Field Duplicate.
6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.

7 NT = Not Tested.

Qualifying Notes:

J The reported result is below the laboratory reporting limit and is estimated.

J+ The reported result is estimated.

Table 3-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
Capuano Center
150 Glen Street
Somerville, Massachusetts

		Sample Location:	Downwind on Roof																					
		Sample ID:	150 GLEN-ROOF B		150 GLEN-ROOF B		150GLEN-ROOF		150 GLEN-ROOF		150 GLEN-ROOF		150GLEN-ROOF		150GLEN-ROOF		150GLEN-ROOF		150GLEN-ROOF		150GLEN-ROOF		150GLEN-ROOF		150GLEN-ROOF	
		Sample Date:	2/8/07		2/8/07		3/8/07		4/20/07		5/17/07		8/9/07		9/10/07		10/14/07		11/14/07		12/17/07		1/21/08		2/19/08	
		Units:	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv
Analyte	**Method**																									
Volatile Organic Compounds (VOCs)	TO-15																									
Carbon tetrachloride			< 1.3	< 1.3	< 0.20	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.69 J	0.11 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20
Dichloroethane,1,1-			< 0.81	< 0.81	< 0.20	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2-			< 0.81	< 0.81	< 0.20	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene,1,1-			< 0.79	< 0.79	< 0.20	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-			< 0.79	< 0.79	< 0.20	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-			< 1.4	< 1.4	< 0.20	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)			< 1.4	< 1.4	< 0.20	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	1.2 J	0.18 J	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane,1,1,1- (TCA)			< 1.2	< 1.2	< 0.21	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21
Trichloroethylene (TCE)			< 1.1	< 1.1	< 0.20	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m^3 = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. FD = Field Duplicate.
6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.

7 NT = Not Tested.

Qualifying Notes:

J The reported result is below the laboratory reporting limit and is estimated.

J+ The reported result is estimated.

Table 3-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
Capuano Center
150 Glen Street
Somerville, Massachusetts

	Sample Location:	Downwind on Roof (cont)											
	Sample ID:	150GLEN-ROOF		150GLEN-ROOF		150GLEN-ROOF		150GLEN-ROOF		150GLEN-ROOF		150GLEN-ROOF	
	Sample Date:	3/17/08		4/21/08		8/18/08		11/24/08		8/27/09		11/11/09	
	Units:	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv
Analyte	**Method**												
Volatile Organic Compounds (VOCs)	TO-15												
Carbon tetrachloride		< 1.3	< 0.20	0.69 J	0.11 J	0.63 J	0.10 J	0.63 J	0.10 J	< 1.3	< 0.20	< 1.3	< 0.20
Dichloroethane,1,1-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene,1,1-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane,1,1,1- (TCA)		< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m^3 = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. FD = Field Duplicate.
6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.

7 NT = Not Tested.

Qualifying Notes:

J The reported result is below the laboratory reporting limit and is estimated.

J+ The reported result is estimated.

Table 4-1. Exposure Pathway Mitigation Measure (EPMM) Status
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

Property Address	EPMM Design Option	Date Completed or Last Modified	Date of Last Indoor Air Monitoring	Construction Details												
				Ventilation Fan(s) (Model No.) [a]	Number of Sub-Slab Vapor Extraction Points (SSDS)	Sub-slab Vapor Barrier - HDPE Liner	Sub-Slab Ventilation System - Geocomposite	Sub-Slab Vapor Trench	Foundation Wall Ventilation System - Geocomposite	New Basement Slab Installed	Crawlspace Vapor Barrier	Epoxy Vapor Barrier - Floor	Epoxy Vapor Barrier - Foundation Walls	Telemetry Installed (if necessary)	Reason Telemetry not Installed (if applicable)
91-93 Franklin Street	3	March, 2009	3/1/2012	-	-	Yes	Yes	-	-	Yes	-	Yes	Yes	NA	NA
95 Franklin Street	2/1[b]	May, 2011	5/16/2013	GP-501	-	-	-	Yes	-	-	Yes	Yes	Yes	No	Access coordination in progress
95R Franklin Street	2	December, 2007	3/8/2010	-	-	-	-	Yes	Yes	-	Yes	Yes	Yes	NA	NA
150 Glen Street	1	April, 2015	5/23/2015	GP-501 (3)	18	-	-	-	-	-	-	-	-	Yes	NA
166-168 Glen Street	3	November, 2010	3/1/2012	-	-	Yes	Yes	-	-	Yes	Yes	Yes	Yes	NA	NA
9 Knowlton Street	1	January, 2010	5/21/2007	GP-501	5	-	-	-	-	-	-	-	-	No	Refused access
13 Knowlton Street	1	January, 2010	2/1/2011	GP-501	4	-	-	-	-	-	-	-	-	No	Access coordination in progress
17 Knowlton Street	3	March, 2009	3/7/2012	-	-	Yes	Yes	-	-	Yes	-	Yes	Yes	NA	NA
31-33 Knowlton Street	1	February, 2008	3/19/2010	HS-5000	7	-	-	-	-	-	-	-	-	Yes	NA
32 Knowlton Street	3	May, 2009	3/8/2011	-	-	-	-	-	-	-	-	-	-	NA	NA
34 Knowlton Street	3	June, 2014	4/27/2015	--	--	Yes	--	--	--	Yes	--	--	--	NA	NA
35-37 Knowlton Street	3/1[b]	April, 2010	3/11/2011	GP-501	-	Yes	Yes	-	-	Yes	-	Yes	Yes	Yes	NA
4 Morton Street	3	November, 2008	3/20/2012	-	-	Yes	Yes	-	-	Yes	-	Yes	Yes	NA	NA
10 Morton Street	3	March, 2009	3/5/2011	-	-	Yes	Yes	-	-	Yes	-	Yes	Yes	NA	NA
11 Morton Street	2	November, 2008	2/23/2010	-	-	-	-	Yes	Yes	-	-	Yes	Yes	NA	NA
12 Morton Street	3	March, 2008	11/19/2010	-	-	Yes	Yes	-	-	Yes	-	Yes	Yes	NA	NA
13 Morton Street	1	October, 2008	9/17/2014	GP-501	5	-	-	-	-	-	-	-	-	Yes	NA
18 Morton Street	1	July, 2007	2/24/2011	GP-501	5	-	-	-	-	-	-	-	-	Yes	NA
19-19A Morton Street	3	August, 2009	3/1/2012	-	-	-	-	-	-	-	-	-	-	NA	NA
23 Tufts Street	1	May, 2007	2/25/2010	GP-501	1	-	-	-	-	-	-	-	-	No	Unresponsive to access requests
27 Tufts Street	3/1[b]	May, 2011	5/23/2013	GP-501	-	Yes	Yes	-	-	Yes	Yes	Yes	Yes	Yes	NA
50 Tufts Street	1	August, 2007	3/11/2015	Regenerative Blower	22	-	-	-	-	-	-	Yes	-	Yes	NA
60 Tufts Street	1	April, 2009	2/5/2011	Regenerative Blower	14	-	-	-	-	-	-	-	-	Yes	NA
103 Washington Street	1	July, 2007	NS	GP-501 and GP-201	3	-	-	-	-	-	-	-	-	Yes	NA

General Notes:
1. NS = Not sampled.
2. NA = Not Applicable.

Footnotes:
(a) Ventilation fans manufactured by Radon Away.
(b) An Option 2 or 3 EPMM was initially installed at these properties; however, a fan was added to the EPMM to improve performance. Therefore, these EPMMs consist of Option 1 with Option 2 or 3 EPMM elements.

Table 4-2. Indoor Air Sampling and EPMM Monitoring - June 16 through December 15, 2015
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
Residential and Commercial Properties
Somerville, Massachusetts

Property	Property Type	Indoor Air Sampling[1]	EPMM Inspection[2]	Indoor Air Sampling Rationale
95R Franklin Street	Residential	Not Sampled	07/21/15	Post-EPMM evaluation - IA sampling complete
31-33 Knowlton Street	Residential	Not Sampled	07/16/15	Post-EPMM evaluation - IA sampling complete
35-37 Knowlton Street	Residential	Not Sampled	07/16/15	Post-EPMM evaluation - IA sampling complete
12 Morton Street	Residential	Not Sampled	07/21/15	Post-EPMM evaluation - IA sampling complete
13 Morton Street	Residential	Not Sampled	07/16/15	Post-EPMM evaluation - IA sampling complete
103 Washington Street	Commercial	Not Sampled	10/15/15	Post-EPMM evaluation - IA sampling complete

General Notes:

1. EPMM = Exposure Pathway Mitigation Measure.
2. See Appendix D for Air Sampling Checklists.
3. See Appendix F for EPMM inspection forms.
5. See Section 4 for a description of EPMM Inspection activities. 60 Tufts Street EPMM is inspected quarterly; see Section 5.
6. NA = No inspection was performed during this reporting period.

Table 5-1. Summary of SSDS Monitoring Events - 60 Tufts Street
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

Monitoring Date	Monitoring Event per RMR Report Period	Type of Monitoring Event	SSDS Field Parameters Measured
6/17/2015	1	SSDS Monthly Monitoring	-Pressure readings and VOC concentrations at system influent/effluent and blower. -System flow rate.
7/30/2015	2	SSDS Monthly Monitoring	-Pressure readings and VOC concentrations at system influent/effluent and blower. -System flow rate.
11/30/2015	3	SSDS Monthly Monitoring	-Pressure readings and VOC concentrations at system influent/effluent and blower. -System flow rate.

General Notes:
1. SSDS = Sub-Slab Depressurization System.
2. RMR = Remedial Monitoring Report.
3. VOC = Volatile Organic Compound.
4. VOC measurements collected with a ppm-RAE calibrated to 100 ppm isobutylene gas.
5. Pressure readings collected using a Dwyer 475-000-FM manamoter.

Table 6-1. Summary of SSDS Monitoring Events - 50 Tufts Street
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

Monitoring Date	Monitoring Event per RMR Report Period	Type of Monitoring Event	SSDS Field Parameters Measured	Analytical Samples Collected (Yes/No)?
6/17/2015	1	SSDS Monthly Monitoring	-Pressure readings and VOC concentrations at each header pipe, the combined influent, and effluent pipes. -Pressure readings and VOC concentrations at carbon tanks. -System flow rate.	No
7/30/2015	2	SSDS Monthly Monitoring	-Pressure readings and VOC concentrations at each header pipe, the combined influent, and effluent pipes. -Pressure readings and VOC concentrations at carbon tanks.	No
11/30/2015	3	SSDS Monthly Monitoring	-Pressure readings and VOC concentrations at each header pipe, the combined influent, and effluent pipes. -Pressure readings and VOC concentrations at carbon tanks. -System flow rate.	No

General Notes:
1. SSDS = Sub-Slab Depressurization System.
2. RMR = Remedial Monitoring Report.
3. VOC = Volatile Organic Compound.
4. VFD = Variable Flow Drive.
5. SVT/SVE = Soil Vapor Temporary Point/Soil Vapor Extraction.
6. VOC measurements collected with a ppm-RAE calibrated to 100 parts per million (ppm) with 10.6V lamp.
7. Pressure readings collected using a Dwyer 475-000-FM manometer.

Table 7-1. Groundwater Elevations
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

		Gauging Date:	5/15/2006		5/16/2006		5/23/2006		5/31/2006		7/24/2006		8/1/2006		8/3/2006	
Monitoring Well ID	Well Screen Interval (ft bgs)	Elevation of Measuring Point (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)
MW-1	unknown	25.90	9.69	16.21	9.53	16.37	10.9	15	11.39	14.51	--	--	--	--	--	--
MW-2	unknown	25.38	8.99	16.39	10.36	15.02	Dry	Dry	Dry	Dry	--	--	--	--	--	--
MW-3	unknown	25.31	8.88	16.43	9.32	15.99	11.16	14.15	12.71	12.6	--	--	--	--	--	--
MW-101	9-19	26.75	--	--	10.56	16.19	11.53	15.22	12.1	14.65	12.33	14.42	12.51	14.24	13.47	13.28
MW-102	6-16	18.89	--	--	6.62	12.27	6.86	12.03	7.44	11.45	7.93	10.96	8.16	10.73	9.11	9.78
MW-103	6-16	19.47	--	--	9.5	9.97	10.37	9.1	10.74	8.73	11.15	8.32	11.31	8.16	12.24	7.23
MW-104	5-15	17.67	--	--	--	--	7.93	9.74	8.89	8.78	9.06	8.61	9.39	8.28	10.29	7.38
MW-105	19-29	38.84	--	--	19.49	19.35	20.21	18.63	20.7	18.14	21.18	17.66	21.43	17.41	22.41	16.43
MW-106	9 - 19	26.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-107	2 - 12	14.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-108	2 - 12	12.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-109	3 - 13	24.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-110	3 - 13	15.58	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-111	4 - 14	18.95	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-112	3 - 10	18.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-112a	4-19	17.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-113	10-20	26.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-114	7-17	29.43	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-115	10-25	27.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-116	5-15	13.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-117S	5 - 20	21.94	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-117T	35 - 45	21.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-117D	60 - 70	21.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-118S	3 - 14	15.52	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-118T	39.5 - 49.5	15.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-118D	70 - 80	15.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-119S	5 - 20	11.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-119T	42 - 47	11.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-120S	5 - 20	12.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-120D	28 - 38	12.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-121S	5 - 20	12.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-121D	32 - 47	12.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-122	4 - 16	16.42	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GEO-1	5 - 20	25.88	9.69	16.19	9.9	15.98	10.92	14.96	11.36	14.52	--	--	--	--	--	--
GEO-2	5 - 20	26.54	9.76	16.78	--	--	11.38	15.16	11.91	14.63	--	--	--	--	--	--
GEO-3	5 - 20	25.64	10.43	15.21	9.59	16.05	9.87	15.77	10.67	14.97	11.67	13.97	11.85	13.79	12.84	12.8
GEO-4	4 - 19	21.69	--	--	7.79	13.9	9.85	11.84	10.78	10.91	11.25	10.44	11.45	10.24	12.43	9.26
GEO-5	5 - 20	20.14	--	--	6.78	13.36	9.08	11.06	9.96	10.18	10.29	9.85	10.56	9.58	11.51	8.63
GEO-6	5 - 20	17.62	--	--	5.66	11.96	7.39	10.23	8.23	9.39	8.43	9.19	8.73	8.89	9.64	7.98
SH-1	9 - 14	29.55	10.15	19.4	11.4	18.15	Dry	Dry	Dry	Dry	--	--	--	--	--	--
SH-2	7 - 14	29.64	5.71	23.93	7.86	21.78	12.07	17.57	12.22	17.42	--	--	--	--	--	--
SH-3	8 - 13	29.66	7.54	22.12	8.56	21.1	12.73	16.93	12.96	16.7	--	--	--	--	--	--
SH-4	11 - 16	29.63	13.53	16.1	13.48	16.15	14.48	15.15	15.02	14.61	--	--	--	--	--	--
SH-5	8 - 13	29.63	Dry	Dry	--	--	12.99	16.64	13.03	16.6	--	--	--	--	--	--
SH-MW1	10 - 30	24.02	6.72	17.3	--	--	11.44	12.58	12.18	11.84	--	--	--	--	--	--
SH-MW2	10 - 25	24.27	9.33	14.94	--	--	12.05	12.22	12.69	11.58	--	--	--	--	--	--
SH-MW3	10 - 24	22.31	7.8	14.51	--	--	10.26	12.05	11.03	11.28	--	--	--	--	--	--
MW201	11-21	27.51	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW202	10.5-20.5	27.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW203	6-18	21.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--

General Notes:
1. ft = feet.
2. bgs = below ground surface.
3. ID = identification.
4 GW = groundwater.
5. NAVD = North American Vertical Datum of 1988.
6. The top of the PVC riser was used as the measuring point for depth to groundwater.
7. "--" = Well not yet installed, abandoned, or not measured.

Table 7-1. Groundwater Elevations
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

		Gauging Date:	8/16/2006		9/29/2006		10/4/2006		11/14/2006		12/12/2006		1/16/2007		2/12/2007	
Monitoring Well ID	Well Screen Interval (ft bgs)	Elevation of Measuring Point (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)
MW-1	unknown	25.90	11.9	14	--	--	11.88	14.02	--	--	--	--	11.6	14.3	--	--
MW-2	unknown	25.38	Dry	Dry	--	--	--	--	--	--	--	--	Destroyed	Destroyed	--	--
MW-3	unknown	25.31	13.73	11.58	--	--	13.75	11.56	--	--	--	--	13.05	12.26	--	--
MW-101	9-19	26.75	12.78	13.97	12.85	13.9	12.76	13.99	12.25	14.5	12.57	14.18	12.4	14.35	12.81	13.94
MW-102	6-16	18.89	8.51	10.38	8.68	10.21	8.52	10.37	7.64	11.25	8.01	10.88	7.72	11.17	8.52	10.37
MW-103	6-16	19.47	11.72	7.75	11.98	7.49	11.92	7.55	11	8.47	11.21	8.26	10.88	8.59	11.74	7.73
MW-104	5-15	17.67	9.87	7.8	9.95	7.72	9.92	7.75	--	--	--	--	8.73	8.94	--	--
MW-105	19-29	38.84	21.91	16.93	22.27	16.57	22.18	16.66	21.16	17.68	21.76	17.08	21.46	17.38	22.03	16.81
MW-106	9 - 19	26.33	--	--	--	--	--	--	--	--	--	--	--	--	12.27	14.06
MW-107	2 - 12	14.63	--	--	--	--	--	--	--	--	--	--	--	--	4.54	10.09
MW-108	2 - 12	12.74	--	--	--	--	--	--	--	--	--	--	--	--	4.93	7.81
MW-109	3 - 13	24.12	--	--	--	--	--	--	--	--	--	--	--	--	12.07	12.05
MW-110	3 - 13	15.58	--	--	--	--	--	--	--	--	--	--	--	--	5.99	9.59
MW-111	4 - 14	18.95	--	--	--	--	--	--	--	--	--	--	--	--	11.38	7.57
MW-112	3 - 10	18.16	--	--	--	--	--	--	--	--	--	--	--	--	Dry	Dry
MW-112a	4-19	17.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-113	10-20	26.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-114	7-17	29.43	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-115	10-25	27.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-116	5-15	13.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-117S	5 - 20	21.94	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-117T	35 - 45	21.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-117D	60 - 70	21.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-118S	3 - 14	15.52	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-118T	39.5 - 49.5	15.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-118D	70 - 80	15.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-119S	5 - 20	11.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-119T	42 - 47	11.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-120S	5 - 20	12.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-120D	28 - 38	12.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-121S	5 - 20	12.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-121D	32 - 47	12.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-122	4 - 16	16.42	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GEO-1	5 - 20	25.88	11.82	14.06	--	--	11.85	14.03	--	--	--	--	11.55	14.33	--	--
GEO-2	5 - 20	26.54	12.51	14.03	--	--	12.51	14.03	--	--	--	--	12.2	14.34	--	--
GEO-3	5 - 20	25.64	12.25	13.39	12.37	2.84	12.35	13.29	11.63	14.01	11.72	13.92	11.58	14.06	12.21	13.43
GEO-4	4 - 19	21.69	11.9	9.79	12.09	9.6	12.04	9.65	10.58	11.11	11.31	10.38	10.77	10.92	11.83	9.86
GEO-5	5 - 20	20.14	10.99	9.15	11.21	8.93	11.15	8.99	9.47	10.67	10.48	9.66	9.73	10.41	11.02	9.12
GEO-6	5 - 20	17.62	9.25	8.37	9.41	8.21	9.26	8.36	7.65	9.97	8.82	8.8	8.11	9.51	9.3	8.32
SH-1	9 - 14	29.55	Dry	Dry	--	--	Dry	Dry	--	--	--	--	Dry	Dry	--	--
SH-2	7 - 14	29.64	11.98	17.66	--	--	12	17.64	--	--	--	--	Dry	Dry	--	--
SH-3	8 - 13	29.66	Dry	Dry	--	--	Dry	Dry	--	--	--	--	Dry	Dry	--	--
SH-4	11 - 16	29.63	15.09	14.54	--	--	15.1	14.53	--	--	--	--	Dry	Dry	--	--
SH-5	8 - 13	29.63	Dry	Dry	--	--	Dry	Dry	--	--	--	--	Dry	Dry	--	--
SH-MW1	10 - 30	24.02	13.09	10.93	--	--	13.17	10.85	--	--	--	--	12.21	11.81	--	--
SH-MW2	10 - 25	24.27	13.38	10.89	--	--	13.41	10.86	--	--	--	--	12.73	11.54	--	--
SH-MW3	10 - 24	22.31	13	9.31	--	--	12.04	10.27	--	--	--	--	11.04	11.27	--	--
MW201	11-21	27.51	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW202	10.5-20.5	27.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW203	6-18	21.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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7. "--" = Well not yet installed, abandoned, or not measured.

Table 7-1. Groundwater Elevations
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

		Gauging Date:	3/14/2007		4/12/2007		5/29/2007		6/26/2007		7/16/2007		8/22/2007		9/27/2007		10/23/2007	
Monitoring Well ID	Well Screen Interval (ft bgs)	Elevation of Measuring Point (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)
MW-1	unknown	25.90	--	--	11.39	14.51	11.41	14.49	11.8	14.1	12.04	13.86	--	--	12.26	13.64	12.07	13.83
MW-2	unknown	25.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	unknown	25.31	--	--	12.57	12.74	14.89	10.42	13.6	11.71	13.94	11.37	--	--	14.34	10.97	13.94	11.37
MW-101	9-19	26.75	12.34	14.41	12.11	14.64	12.17	14.58	12.62	14.13	12.85	13.9	13.03	13.72	13.17	13.58	12.91	13.84
MW-102	6-16	18.89	--	--	7.46	11.43	6.72	12.17	8.36	10.53	8.74	10.15	9.08	9.81	9.35	9.54	8.97	9.92
MW-103	6-16	19.47	11	8.47	10.66	8.81	10.81	8.66	11.47	8.0	11.92	7.55	12.3	7.17	12.63	6.84	--	--
MW-104	5-15	17.67	--	--	8.75	8.92	--	--	9.62	8.05	10.09	7.58	10.36	7.31	10.61	7.06	10.31	7.36
MW-105	19-29	38.84	21.56	17.28	20.88	17.96	20.86	17.98	21.55	17.29	22.13	16.71	22.79	16.05	23.18	15.66	22.96	15.88
MW-106	9 - 19	26.33	12.91	13.42	11.65	14.68	11.69	14.64	12.07	14.26	12.33	14	12.48	13.85	12.61	13.72	12.39	13.94
MW-107	2 - 12	14.63	4.5	10.13	4.49	10.14	4.46	10.17	4.48	10.15	4.52	10.11	4.75	9.88	4.51	10.12	4.47	10.16
MW-108	2 - 12	12.74	4.02	8.72	9.91	2.83	4.25	8.49	5.06	7.68	6.59	6.15	6.25	6.49	6.28	6.46	5.86	6.88
MW-109	3 - 13	24.12	11.27	12.85	10.27	13.85	10.73	13.39	11.76	12.36	12.24	11.88	Dry	Dry	Dry	Dry	Dry	Dry
MW-110	3 - 13	15.58	1.46	14.12	1.04	14.54	2.56	13.02	6.57	9.01	7.17	8.41	7.86	7.72	8.37	7.21	6.92	8.66
MW-111	4 - 14	18.95	10.62	8.33	10.65	8.3	10.68	8.27	11.11	7.84	11.54	7.41	11.96	6.99	12.34	6.61	11.99	6.96
MW-112	3 - 10	18.16	8.01	10.15	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
MW-112a	4-19	17.78	12.76	5.02	12.76	5.02	12.67	5.11	12.81	4.97	12.88	4.9	--	--	12.95	4.83	12.8	4.98
MW-113	10-20	26.16	11.66	14.5	11.44	14.72	11.51	14.65	11.99	14.17	12.22	13.94	12.43	13.73	12.58	13.58	12.3	13.86
MW-114	7-17	29.43	12.67	16.76	11.27	18.16	11.53	17.9	12.88	16.55	15.57	13.86	14.24	15.19	14.84	14.59	14.66	14.77
MW-115	10-25	27.15	17.19	9.96	16.21	10.94	16.63	10.52	17.42	9.73	17.97	9.18	18.38	8.77	18.81	8.34	18.37	8.78
MW-116	5-15	13.45	8.78	4.67	8.34	5.11	8.65	4.8	8.76	4.69	--	--	8.85	4.6	8.91	4.54	8.83	4.62
MW-117S	5 - 20	21.94	--	--	--	--	--	--	--	--	15.27	6.67	15.7	6.24	16.03	5.91	16.2	5.74
MW-117T	35 - 45	21.87	--	--	--	--	--	--	--	--	15.95	5.92	16.38	5.49	16.81	5.06	16.91	4.96
MW-117D	60 - 70	21.78	--	--	--	--	--	--	--	--	15.87	5.91	16.26	5.52	16.69	5.09	16.77	5.01
MW-118S	3 - 14	15.52	--	--	--	--	--	--	--	--	11.64	3.88	9.84	5.68	10.2	5.32	9.42	6.1
MW-118T	39.5 - 49.5	15.30	--	--	--	--	--	--	--	--	10.36	4.94	10.51	4.79	10.74	4.56	10.68	4.62
MW-118D	70 - 80	15.15	--	--	--	--	--	--	--	--	10.18	4.97	10.32	4.83	10.55	4.6	10.49	4.66
MW-119S	5 - 20	11.74	--	--	--	--	--	--	--	--	--	--	4.91	6.83	4.99	6.75	4.93	6.81
MW-119T	42 - 47	11.67	--	--	--	--	--	--	--	--	--	--	6.45	5.22	6.8	4.87	6.72	4.95
MW-120S	5 - 20	12.54	--	--	--	--	--	--	--	--	--	--	5.25	7.29	5.35	7.19	4.71	7.83
MW-120D	28 - 38	12.45	--	--	--	--	--	--	--	--	--	--	--	--	4.21	8.24	3.94	8.51
MW-121S	5 - 20	12.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7.36	5.08
MW-121D	32 - 47	12.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7.92	4.89
MW-122	4 - 16	16.42	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GEO-1	5 - 20	25.88	--	--	11.36	14.52	11.38	14.5	11.73	14.15	11.93	13.95	12.1	13.78	12.21	13.67	11.98	13.9
GEO-2	5 - 20	26.54	--	--	11.97	14.57	11.99	14.55	12.4	14.14	13.6	12.94	12.81	13.73	12.91	13.63	12.63	13.91
GEO-3	5 - 20	25.64	11.49	14.15	10.76	14.88	11.04	14.6	11.94	13.7	---	---	12.7	12.94	12.94	12.7	12.61	13.03
GEO-4	4 - 19	21.69	11.03	10.66	10.51	11.18	10.87	10.82	11.64	10.05	12.09	9.6	12.55	9.14	13.02	8.67	12.64	9.05
GEO-5	5 - 20	20.14	10.15	9.99	9.7	10.44	10.01	10.13	10.79	9.35	11.25	8.89	11.74	8.4	11.18	8.96	11.72	8.42
GEO-6	5 - 20	17.62	8.54	9.08	8.32	9.3	8.25	9.37	8.9	8.72	9.5	8.12	9.92	7.7	10.22	7.4	9.96	7.66
SH-1	9 - 14	29.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-2	7 - 14	29.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-3	8 - 13	29.66	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-4	11 - 16	29.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-5	8 - 13	29.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-MW1	10 - 30	24.02	--	--	12.01	12.01	12.26	11.76	---	---	---	---	--	--	--	--	--	--
SH-MW2	10 - 25	24.27	--	--	12.61	11.66	12.74	11.53	13.25	11.02	13.48	10.79	13.72	10.55	14.04	10.23	13.68	10.59
SH-MW3	10 - 24	22.31	--	--	10.81	11.5	--	--	11.72	10.59	12.08	10.23	12.43	9.88	12.79	9.52	12.41	9.9
MW201	11-21	27.51	--	--	--	--	--	--	--	--	--	--	13.71	13.8	13.83	13.68	13.58	13.93
MW202	10.5-20.5	27.82	--	--	--	--	--	--	--	--	--	--	13.99	13.83	14.08	13.74	13.88	13.94
MW203	6-18	21.80	--	--	--	--	--	--	--	--	--	--	14.05	7.75	14.39	7.41	13.86	7.94

General Notes:
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3. ID = identification.
4 GW = groundwater.
5. NAVD = North American Vertical Datum of 1988.
6. The top of the PVC riser was used as the measuring point for depth to groundwater.
7. "--" = Well not yet installed, abandoned, or not measured.

Table 7-1. Groundwater Elevations
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

		Gauging Date:	11/30/2007		1/9/2008		2/26/2008		3/18/2008		4/15/2008		5/19/2008		7/14/08		8/22/08	
Monitoring Well ID	Well Screen Interval (ft bgs)	Elevation of Measuring Point (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)
MW-1	unknown	25.90	11.95	13.95	--	--	--	--	--	--	11.42	14.48	11.57	14.33	--	--	--	--
MW-2	unknown	25.38	--	--	--	--	--	--	--	--	--	---	--	--	--	--	--	--
MW-3	unknown	25.31	13.75	11.56	12.86	12.45	12.05	13.26	12.37	12.94	12.81	12.5	12.99	---	--	--	--	--
MW-101	9-19	26.75	13.82	12.93	12.11	14.64	--	--	11.85	14.9	12.02	14.73	12.26	14.49	13.11	13.64	--	--
MW-102	6-16	18.89	8.01	10.88	7.46	11.43	7.29	11.6	7.17	11.72	8.57	10.32	7.9	10.99	9.51	9.38	8.00	10.89
MW-103	6-16	19.47	12.18	7.29	10.74	8.73	10.51	8.96	10.5	8.97	10.82	8.65	11.11	8.36	12.17	7.30	11.17	8.30
MW-104	5-15	17.67	10.07	7.6	8.86	8.81	8.61	9.06	8.48	9.19	9.84	7.83	9.25	8.42	9.67	8.00	9.06	8.61
MW-105	19-29	38.84	22.74	16.1	21.39	17.45	20.79	18.05	20.41	18.43	20.91	17.93	21.24	17.6	22.02	16.82	21.40	17.44
MW-106	9 - 19	26.33	12.27	14.06	11.71	14.62	11.51	14.82	11.38	14.95	12.54	13.79	11.72	14.61	11.68	14.65	11.73	14.60
MW-107	2 - 12	14.63	4.44	10.19	4.35	10.28	--	--	4.46	10.17	5.58	9.05	---	---	4.52	10.11	4.41	10.22
MW-108	2 - 12	12.74	4.74	8.0	3.71	9.03	4.61	8.13	3.68	9.06	3.91	8.83	3.99	8.75	5.16	7.58	4.44	8.30
MW-109	3 - 13	24.12	12.78	11.34	10.64	13.48	10.06	14.06	10.02	14.1	11.64	12.48	11.29	12.83	11.87	12.25	11.18	12.94
MW-110	3 - 13	15.58	3.34	12.24	--	--	0.79	14.79	1.12	14.46	1.57	14.01	2.5	13.08	--	--	3.59	11.99
MW-111	4 - 14	18.95	12.27	6.68	10.51	8.44	10.5	8.45	10.54	8.41	16.64	2.31	10.71	8.24	12.23	6.72	10.73	8.22
MW-112	3 - 10	18.16	Dry	Dry	Dry	Dry	Dry	Dry	--	--	----	---	---	---	--	--	8.33	9.83
MW-112a	4-19	17.78	--	--	12.43	5.35	12.52	5.26	12.61	5.17	13.71	4.07	12.77	5.01	13.56	4.22	12.93	4.85
MW-113	10-20	26.16	12.6	13.56	11.5	14.66	11.28	14.88	11.15	15.01	11.39	14.77	11.62	14.54	12.01	14.15	11.63	14.53
MW-114	7-17	29.43	14.31	15.12	12.08	17.35	11.11	18.32	10.75	18.68	12.42	17.01	12.3	17.13	13.24	16.19	12.21	17.22
MW-115	10-25	27.15	18.24	8.91	16.18	10.97	15.85	11.3	15.86	11.29	16.45	10.7	16.72	10.43	18.49	8.66	16.78	10.37
MW-116	5-15	13.45	--	--	8.6	4.85	8.68	4.77	8.77	4.68	8.85	4.6	8.88	4.57	9.09	4.36	9.01	4.44
MW-117S	5 - 20	21.94	15.95	5.99	13.97	7.97	13.52	8.42	13.5	8.44	14.22	7.72	14.6	7.34	14.99	6.95	13.90	8.04
MW-117T	35 - 45	21.87	16.58	5.29	14.58	7.29	13.97	7.9	13.9	7.97	14.67	7.2	14.94	6.93	15.68	6.19	15.27	6.60
MW-117D	60 - 70	21.78	16.44	5.34	14.46	7.32	13.86	7.92	13.81	7.97	14.51	7.27	14.89	6.89	15.61	6.17	14.67	7.11
MW-118S	3 - 14	15.52	9.4	6.12	8.55	6.97	8.34	7.18	8.4	7.12	10	5.52	9.38	6.14	9.64	5.88	8.48	7.04
MW-118T	39.5 - 49.5	15.30	10.5	4.8	9.93	5.37	9.49	5.81	9.53	5.77	9.83	5.47	9.94	5.36	10.35	4.95	9.92	5.38
MW-118D	70 - 80	15.15	10.25	4.9	9.55	5.6	9.3	5.85	9.35	5.8	9.64	5.51	9.8	5.35	10.11	5.04	9.70	5.45
MW-119S	5 - 20	11.74	4.85	6.89	4.63	7.11	4.6	7.14	4.56	7.18	4.91	6.83	4.92	6.82	4.94	6.80	6.08	5.66
MW-119T	42 - 47	11.67	6.57	5.1	5.82	5.85	5.63	6.04	5.78	5.89	5.97	5.7	6.1	5.57	6.52	5.15	4.52	7.15
MW-120S	5 - 20	12.54	4.62	7.92	3.51	9.03	4.06	8.48	4.0	8.54	5.1	7.44	4.57	7.97	5.18	7.36	4.61	7.93
MW-120D	28 - 38	12.45	3.48	8.97	3.17	9.28	2.96	9.49	3.11	9.34	3.26	9.19	3.44	9.01	3.82	8.63	2.90	9.55
MW-121S	5 - 20	12.44	7.41	5.03	7.24	5.2	7.36	5.08	7.41	5.03	9.39	3.05	7.29	5.15	9.21	3.23	7.70	4.74
MW-121D	32 - 47	12.81	7.75	5.06	6.95	5.86	6.83	5.98	6.91	5.9	7.31	5.5	7.27	5.54	7.64	5.17	7.30	5.51
MW-122	4 - 16	16.42	--	--	--	--	12.98	3.44	13	3.42	13.03	3.39	12.99	3.43	13.15	3.27	13.17	3.25
GEO-1	5 - 20	25.88	11.91	13.97	11.41	14.47	11.22	14.66	--	--	11.25	14.63	11.4	14.48	12.32	13.56	12.00	13.88
GEO-2	5 - 20	26.54	12.57	13.97	12.02	14.52	11.77	14.77	--	--	12.81	13.73	12.01	14.53	11.73	14.81	11.41	15.13
GEO-3	5 - 20	25.64	12.54	13.1	10.99	14.65	10.71	14.93	--	--	10.97	14.67	---	---	12.05	13.59	11.57	14.07
GEO-4	4 - 19	21.69	12.47	9.22	11.72	9.97	10.36	11.33	10.34	11.35	11.46	10.23	11.13	10.56	11.60	10.09	11.16	10.53
GEO-5	5 - 20	20.14	12.62	7.52	9.92	10.22	9.42	10.72	9.52	10.62	10.8	9.34	10.21	9.93	10.89	9.25	10.28	9.86
GEO-6	5 - 20	17.62	9.96	7.66	8.21	9.41	7.78	9.84	7.86	9.76	9.11	8.51	8.51	9.11	9.20	8.42	7.91	9.71
SH-1	9 - 14	29.55	--	--	--	--	--	--	--	--	---	---	---	---	--	--	--	--
SH-2	7 - 14	29.64	--	--	--	--	--	--	--	--	---	---	---	---	--	--	--	--
SH-3	8 - 13	29.66	--	--	--	--	--	--	--	--	---	---	---	---	--	--	--	--
SH-4	11 - 16	29.63	--	--	--	--	--	--	--	--	---	---	---	---	--	--	--	--
SH-5	8 - 13	29.63	--	--	--	--	--	--	--	--	---	---	---	---	--	--	--	--
SH-MW1	10 - 30	24.02	--	--	--	--	--	--	--	--	---	---	---	---	--	--	--	--
SH-MW2	10 - 25	24.27	13.85	10.42	12.77	11.5	12.49	11.78	12.46	11.81	13.62	10.65	12.89	11.38	11.83	12.44	12.92	11.35
SH-MW3	10 - 24	22.31	12.05	10.26	11.55	10.76	10.68	11.63	10.65	11.66	11.83	10.48	11.21	11.1	13.27	9.04	11.30	11.01
MW201	11-21	27.51	13.5	14.01	12.98	14.53	12.76	14.75	12.64	14.87	12.85	14.66	13.94	13.57	13.31	14.2	13.00	14.51
MW202	10.5-20.5	27.82	13.81	14.01	13.41	14.41	13.22	14.6	13.12	14.7	12.73	15.09	13.37	14.45	13.68	14.14	13.41	14.41
MW203	6-18	21.80	13.61	8.19	12.86	8.94	12.03	9.77	12	9.8	13.31	8.49	12.68	9.12	13.15	8.65	12.55	9.25

General Notes:
1. ft = feet.
2. bgs = below ground surface.
3. ID = identification.
4 GW = groundwater.
5. NAVD = North American Vertical Datum of 1988.
6. The top of the PVC riser was used as the measuring point for depth to groundwater.
7. "--" = Well not yet installed, abandoned, or not measured.

Table 7-1. Groundwater Elevations
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

		Gauging Date:	10/20/08		1/13/09		4/13/09		7/14/09		10/14/09		4/12/10		10/27/10		4/20/11	
Monitoring Well ID	Well Screen Interval (ft bgs)	Elevation of Measuring Point (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)
MW-1	unknown	25.90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	unknown	25.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	unknown	25.31	--	--	12.49	12.82	12.28	13.03	12.92	12.39	13.19	12.12	--	--	--	--	--	--
MW-101	9-19	26.75	12.61	14.14	12.07	14.68	11.91	14.84	12.2	14.55	12.37	14.38	11.61	15.14	--	--	11.73	15.02
MW-102	6-16	18.89	8.49	10.4	7.50	11.39	7.35	11.54	7.85	11.04	7.99	10.9	7.11	11.78	--	--	7.04	11.85
MW-103	6-16	19.47	11.87	7.6	10.73	8.74	10.57	8.9	11.07	8.4	11.34	8.13	10.47	9.00	--	--	10.39	9.08
MW-104	5-15	17.67	9.72	7.95	8.71	8.96	7.98	9.69	8.84	8.83	9.38	8.29	8.52	9.15	--	--	9.28	8.39
MW-105	19-29	38.84	21.8	17.04	20.9	17.94	20.65	18.19	21.4	17.44	21.8	17.04	19.84	19.00	--	--	20.63	18.21
MW-106	9 - 19	26.33	11.64	14.69	11.6	14.73	11.49	14.84	overflowing	--	overflowing	--	11.16	15.17	--	--	11.39	14.94
MW-107	2 - 12	14.63	4.49	10.14	4.5	10.13	4.47	10.16	overflowing	--	overflowing	--	4.31	10.32	--	--	4.43	10.2
MW-108	2 - 12	12.74	4.71	8.03	3.4	9.34	3.73	9.01	4.37	8.37	4.66	8.08	3.86	8.88	--	--	3.56	9.18
MW-109	3 - 13	24.12	11.73	12.39	10.43	13.69	10.4	13.72	11.11	13.01	--	--	9.88	14.24	--	--	10.10	14.02
MW-110	3 - 13	15.58	--	--	1.45	14.13	1.1	14.48	2.88	12.7	2.42	13.16	1.39	14.19	--	--	1.67	13.91
MW-111	4 - 14	18.95	11.37	7.58	10.55	8.4	10.56	8.39	10.67	8.28	10.41	8.54	10.57	8.38	--	--	10.62	8.33
MW-112	3 - 10	18.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-112a	4-19	17.78	13.01	4.77	12.78	5.0	12.63	5.15	12.78	5.0	12.58	5.2	12.62	5.16	12.31	5.47	12.14	5.64
MW-113	10-20	26.16	11.99	14.17	11.41	14.75	11.23	14.93	11.56	14.6	11.73	14.43	10.93	15.23	--	--	11.00	15.16
MW-114	7-17	29.43	13.19	16.24	11.25	18.18	10.97	18.46	12.04	17.39	--	--	10.24	19.19	--	--	10.46	18.97
MW-115	10-25	27.15	17.8	9.35	16.35	10.8	15.4	11.75	16.58	10.57	17.4	9.75	16.43	10.72	--	--	16.22	10.93
MW-116	5-15	13.45	--	--	8.94	--	8.87	4.58	8.97	4.48	8.76	4.69	8.85	4.6	--	--	8.32	5.13
MW-117S	5 - 20	21.94	14.67	7.27	14.02	7.92	14.38	7.56	14.66	7.28	14.75	7.19	13.32	8.62	--	--	14.06	7.88
MW-117T	35 - 45	21.87	15.26	6.61	14.45	7.42	14.43	7.44	15.03	6.84	15.26	6.61	13.56	8.31	--	--	14.18	7.69
MW-117D	60 - 70	21.78	15.27	6.51	14.3	7.48	14.26	7.52	14.89	6.89	15.13	6.65	13.48	8.3	--	--	14.01	7.77
MW-118S	3 - 14	15.52	9.05	6.47	8.41	7.11	8.7	6.82	9.43	6.09	9.01	6.51	8.31	7.21	--	--	8.55	6.97
MW-118T	39.5 - 49.5	15.30	10.19	5.11	9.73	5.57	9.64	5.66	9.92	5.38	9.99	5.31	9.49	5.81	--	--	9.33	5.97
MW-118D	70 - 80	15.15	9.99	5.16	9.54	5.61	9.47	5.68	9.74	5.41	9.73	5.42	9.29	5.86	--	--	9.15	6.00
MW-119S	5 - 20	11.74	4.08	7.66	4.41	7.33	4.21	7.53	4.47	7.27	4.33	7.41	4.33	7.41	--	--	4.08	7.66
MW-119T	42 - 47	11.67	6.78	4.89	5.85	5.82	5.8	5.87	6.04	5.63	6.01	5.66	5.68	5.99	--	--	5.55	6.12
MW-120S	5 - 20	12.54	4.01	8.53	4.03	8.51	3.85	8.69	4.31	8.23	3.58	8.96	3.98	8.56	--	--	3.65	8.89
MW-120D	28 - 38	12.45	3.32	9.13	3.18	9.27	3.11	9.34	3.31	9.14	3.29	9.16	3.04	9.41	--	--	3.18	9.27
MW-121S	5 - 20	12.44	9.01	3.43	7.68	4.76	7.57	4.87	7.62	4.82	7.71	4.73	7.67	4.77	--	--	7.12	5.32
MW-121D	32 - 47	12.81	9.64	3.17	7.07	5.74	6.98	5.83	7.27	5.54	7.37	5.44	6.87	5.94	--	--	6.77	6.04
MW-122	4 - 16	16.42	11.42	5.0	13.15	3.27	13.16	3.26	13.14	3.28	13.12	3.3	13.09	3.33	13.04	3.38	13.06	3.36
GEO-1	5 - 20	25.88	12.14	13.74	11.26	14.62	11.07	14.81	11.31	14.57	11.54	14.34	17.06	8.82	--	--	10.92	14.96
GEO-2	5 - 20	26.54	11.58	14.96	11.88	14.66	11.7	14.84	11.99	14.55	12.25	14.29	11.41	15.13	--	--	10.55	15.99
GEO-3	5 - 20	25.64	--	--	--	--	10.86	14.78	11.48	14.16	11.79	13.85	10.27	15.37	--	--	10.62	15.02
GEO-4	4 - 19	21.69	11.89	9.8	10.56	11.13	10.21	11.48	11.00	10.69	--	--	10.26	11.43	--	--	--	--
GEO-5	5 - 20	20.14	11.79	8.35	9.70	10.44	9.30	10.84	10.08	10.06	10.44	9.7	9.48	10.66	--	--	9.18	10.96
GEO-6	5 - 20	17.62	10.95	6.67	8.02	9.6	7.48	10.14	8.18	9.44	8.66	8.96	7.62	10	--	--	7.63	9.99
SH-1	9 - 14	29.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-2	7 - 14	29.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-3	8 - 13	29.66	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-4	11 - 16	29.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-5	8 - 13	29.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-MW1	10 - 30	24.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-MW2	10 - 25	24.27	12.01	12.26	12.63	11.64	12.33	11.94	12.77	11.5	13.01	11.26	10.61	13.66	--	--	12.29	11.98
SH-MW3	10 - 24	22.31	12.49	9.82	10.87	11.44	10.52	11.79	11.12	11.19	11.46	10.85	12.39	9.92	--	--	10.46	11.85
MW201	11-21	27.51	14.64	12.87	13.27	14.24	12.69	14.82	12.94	14.57	13.09	14.42	12.42	15.09	--	--	12.57	14.94
MW202	10.5-20.5	27.82	13.29	14.53	12.82	15	13.15	14.67	13.33	14.49	13.55	14.27	12.94	14.88	--	--	13.02	14.80
MW203	6-18	21.80	13.02	8.78	12.25	9.55	11.5	10.3	12.29	9.51	12.77	9.03	12.03	9.77	--	--	11.83	9.97

General Notes:
1. ft = feet.
2. bgs = below ground surface.
3. ID = identification.
4 GW = groundwater.
5. NAVD = North American Vertical Datum of 1988.
6. The top of the PVC riser was used as the measuring point for depth to groundwater.
7. "--" = Well not yet installed, abandoned, or not measured.

Table 7-1. Groundwater Elevations
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

		Gauging Date:	11/16/11		4/16/12		11/12/12		4/23/13		11/18/13		4/30/14		6/11/14		11/18/14	
Monitoring Well ID	Well Screen Interval (ft bgs)	Elevation of Measuring Point (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)
MW-1	unknown	25.90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	unknown	25.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	unknown	25.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-101	9-19	26.75	--	--	12.71	14.04	--	--	12.41	14.34	--	--	12.03	14.72	--	--	--	--
MW-102	6-16	18.89	--	--	8.53	10.36	--	--	8.01	10.88	--	--	7.68	11.21	--	--	--	--
MW-103	6-16	19.47	--	--	11.79	7.68	--	--	11.22	8.25	--	--	10.96	8.51	--	--	--	--
MW-104	5-15	17.67	--	--	10.24	7.43	--	--	9.64	8.03	--	--	9.5	8.17	--	--	--	--
MW-105	19-29	38.84	--	--	--	--	--	--	21.31	17.53	--	--	--	--	--	--	--	--
MW-106	9 - 19	26.33	--	--	--	--	--	--	--	--	--	--	11.71	14.62	--	--	--	--
MW-107	2 - 12	14.63	--	--	--	--	--	--	--	--	--	--	3.61	11.02	--	--	--	--
MW-108	2 - 12	12.74	--	--	4.72	8.02	--	--	4.34	8.4	--	--	4.09	8.65	--	--	--	--
MW-109	3 - 13	24.12	--	--	12.15	11.97	--	--	11.37	12.75	--	--	10.79	13.33	--	--	--	--
MW-110	3 - 13	15.58	--	--	--	--	--	--	--	--	--	--	2.61	12.97	--	--	--	--
MW-111	4 - 14	18.95	--	--	11.6	7.35	--	--	11.01	7.94	--	--	10.96	7.99	--	--	--	--
MW-112	3 - 10	18.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-112a	4-19	17.78	12.30	5.48	12.70	5.08	12.72	5.06	12.80	4.98	13.11	4.67	--	--	12.86	4.92	12.39	5.39
MW-113	10-20	26.16	--	--	12.11	14.05	--	--	11.73	14.43	--	--	11.42	14.74	--	--	--	--
MW-114	7-17	29.43	--	--	13.70	15.73	--	--	12.24	17.19	--	--	12.05	17.38	--	--	--	--
MW-115	10-25	27.15	--	--	18.51	8.64	--	--	17.76	9.39	--	--	17.51	9.64	--	--	--	--
MW-116	5-15	13.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-117S	5 - 20	21.94	--	--	9.06	12.88	--	--	14.39	7.55	--	--	13.63	8.31	--	--	--	--
MW-117T	35 - 45	21.87	--	--	15.58	6.29	--	--	15.19	6.68	--	--	14.78	7.09	--	--	--	--
MW-117D	60 - 70	21.78	--	--	15.81	5.97	--	--	15.09	6.69	--	--	14.71	7.07	--	--	--	--
MW-118S	3 - 14	15.52	--	--	9.66	5.86	--	--	9.41	6.11	--	--	9.01	6.51	--	--	--	--
MW-118T	39.5 - 49.5	15.30	--	--	10.30	5	--	--	10.12	5.18	--	--	9.94	5.36	--	--	--	--
MW-118D	70 - 80	15.15	--	--	10.11	5.04	10.03	5.12	10.00	5.15	10.73	4.42	9.82	5.33	--	--	10.20	4.95
MW-119S	5 - 20	11.74	--	--	5.14	6.6	--	--	4.70	7.04	--	--	4.31	7.43	--	--	--	--
MW-119T	42 - 47	11.67	--	--	6.50	5.17	--	--	6.25	5.42	--	--	6.11	5.56	--	--	--	--
MW-120S	5 - 20	12.54	--	--	4.78	7.76	--	--	4.26	8.28	--	--	4.19	8.35	--	--	--	--
MW-120D	28 - 38	12.45	--	--	3.87	8.58	--	--	3.40	9.05	--	--	4.41	8.04	--	--	--	--
MW-121S	5 - 20	12.44	--	--	7.26	5.18	--	--	6.93	5.51	--	--	5.95	6.49	--	--	--	--
MW-121D	32 - 47	12.81	--	--	7.69	5.12	7.55	5.26	7.41	5.4	8.13	4.68	7.35	5.46	--	--	7.27	5.54
MW-122	4 - 16	16.42	13.16	3.26	13.1	3.32	13.16	3.26	13.14	3.28	13.12	3.3	13.12	3.30	--	--	13.04	3.38
GEO-1	5 - 20	25.88	--	--	--	--	--	--	11.50	14.38	--	--	11.19	14.69	--	--	--	--
GEO-2	5 - 20	26.54	--	--	11.81	14.73	--	--	12.19	14.35	--	--	11.99	14.55	--	--	--	--
GEO-3	5 - 20	25.64	--	--	12.21	13.43	--	--	11.57	14.07	--	--	11.10	14.54	--	--	--	--
GEO-4	4 - 19	21.69	--	--	11.98	9.71	--	--	11.29	10.4	--	--	11.09	10.6	--	--	--	--
GEO-5	5 - 20	20.14	--	--	11.18	8.96	--	--	10.45	9.69	--	--	10.25	9.89	--	--	--	--
GEO-6	5 - 20	17.62	--	--	9.54	8.08	--	--	8.56	9.06	--	--	8.30	9.32	--	--	--	--
SH-1	9 - 14	29.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-2	7 - 14	29.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-3	8 - 13	29.66	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-4	11 - 16	29.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-5	8 - 13	29.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-MW1	10 - 30	24.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-MW2	10 - 25	24.27	--	--	13.53	10.74	--	--	13.13	11.14	--	--	12.95	11.32	--	--	--	--
SH-MW3	10 - 24	22.31	--	--	12.00	10.31	--	--	11.43	10.88	--	--	11.23	11.08	--	--	--	--
MW201	11-21	27.51	--	--	13.43	14.08	--	--	13.15	14.36	--	--	12.97	14.54	--	--	--	--
MW202	10.5-20.5	27.82	--	--	--	--	--	--	13.54	14.28	--	--	13.32	14.50	--	--	--	--
MW203	6-18	21.80	--	--	13.85	7.95	--	--	13.15	8.65	--	--	12.92	8.88	--	--	--	--

General Notes:
1. ft = feet.
2. bgs = below ground surface.
3. ID = identification.
4 GW = groundwater.
5. NAVD = North American Vertical Datum of 1988.
6. The top of the PVC riser was used as the measuring point for depth to groundwater.
7. "--" = Well not yet installed, abandoned, or not measured.

Table 7-1. Groundwater Elevations
Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street
Somerville, Massachusetts

		Gauging Date:	4/1/15		4/17/15		11/19/15	
Monitoring Well ID	Well Screen Interval (ft bgs)	Elevation of Measuring Point (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)
MW-1	unknown	25.90	--	--	--	--	--	--
MW-2	unknown	25.38	--	--	--	--	--	--
MW-3	unknown	25.31	--	--	--	--	--	--
MW-101	9-19	26.75	--	--	--	--	--	--
MW-102	6-16	18.89	6.99	11.9	--	--	--	--
MW-103	6-16	19.47	10.43	9.04	--	--	--	--
MW-104	5-15	17.67	8.04	9.63	--	--	--	--
MW-105	19-29	38.84	--	--	--	--	--	--
MW-106	9 - 19	26.33	--	--	--	--	--	--
MW-107	2 - 12	14.63	--	--	--	--	--	--
MW-108	2 - 12	12.74	3.31	9.43	--	--	--	--
MW-109	3 - 13	24.12	9.61	14.51	--	--	--	--
MW-110	3 - 13	15.58	0.60	14.98	--	--	--	--
MW-111	4 - 14	18.95	10.80	8.15	--	--	--	--
MW-112	3 - 10	18.16	--	--	--	--	--	--
MW-112a	4-19	17.78	--	--	12.86	4.92	--	--
MW-113	10-20	26.16	10.64	15.52	--	--	--	--
MW-114	7-17	29.43	10.06	19.37	--	--	--	--
MW-115	10-25	27.15	16.50	10.65	--	--	--	--
MW-116	5-15	13.45	--	--	--	--	--	--
MW-117S	5 - 20	21.94	9.66	12.28	--	--	--	--
MW-117T	35 - 45	21.87	13.95	7.92	--	--	--	--
MW-117D	60 - 70	21.78	13.88	7.90	--	--	--	--
MW-118S	3 - 14	15.52	8.04	7.48	--	--	--	--
MW-118T	39.5 - 49.5	15.30	9.63	5.67	--	--	--	--
MW-118D	70 - 80	15.15	9.47	5.68	--	--	11.99	3.16
MW-119S	5 - 20	11.74	4.16	7.58	--	--	--	--
MW-119T	42 - 47	11.67	5.80	5.87	--	--	--	--
MW-120S	5 - 20	12.54	3.54	9.00	--	--	--	--
MW-120D	28 - 38	12.45	3.10	9.35	--	--	--	--
MW-121S	5 - 20	12.44	6.77	5.67	--	--	--	--
MW-121D	32 - 47	12.81	7.01	5.80	--	--	8.83	3.98
MW-122	4 - 16	16.42	13.15	3.27	--	--	13.23	3.19
GEO-1	5 - 20	25.88	10.69	15.19	--	--	--	--
GEO-2	5 - 20	26.54	11.34	15.20	--	--	--	--
GEO-3	5 - 20	25.64	9.92	15.72	--	--	--	--
GEO-4	4 - 19	21.69	10.17	11.52	--	--	--	--
GEO-5	5 - 20	20.14	9.29	10.85	--	--	--	--
GEO-6	5 - 20	17.62	7.84	9.78	--	--	--	--
SH-1	9 - 14	29.55	--	--	--	--	--	--
SH-2	7 - 14	29.64	--	--	--	--	--	--
SH-3	8 - 13	29.66	--	--	--	--	--	--
SH-4	11 - 16	29.63	--	--	--	--	--	--
SH-5	8 - 13	29.63	--	--	--	--	--	--
SH-MW1	10 - 30	24.02	--	--	--	--	--	--
SH-MW2	10 - 25	24.27	12.41	11.86	--	--	--	--
SH-MW3	10 - 24	22.31	10.55	11.76	--	--	--	--
MW201	11-21	27.51	12.40	15.11	--	--	--	--
MW202	10.5-20.5	27.82	12.93	14.89	--	--	--	--
MW203	6-18	21.80	12.05	9.75	--	--	--	--

General Notes:
1. ft = feet.
2. bgs = below ground surface.
3. ID = identification.
4 GW = groundwater.
5. NAVD = North American Vertical Datum of 1988.
6. The top of the PVC riser was used as the measuring point for depth to groundwater.
7. "--" = Well not yet installed, abandoned, or not measured.

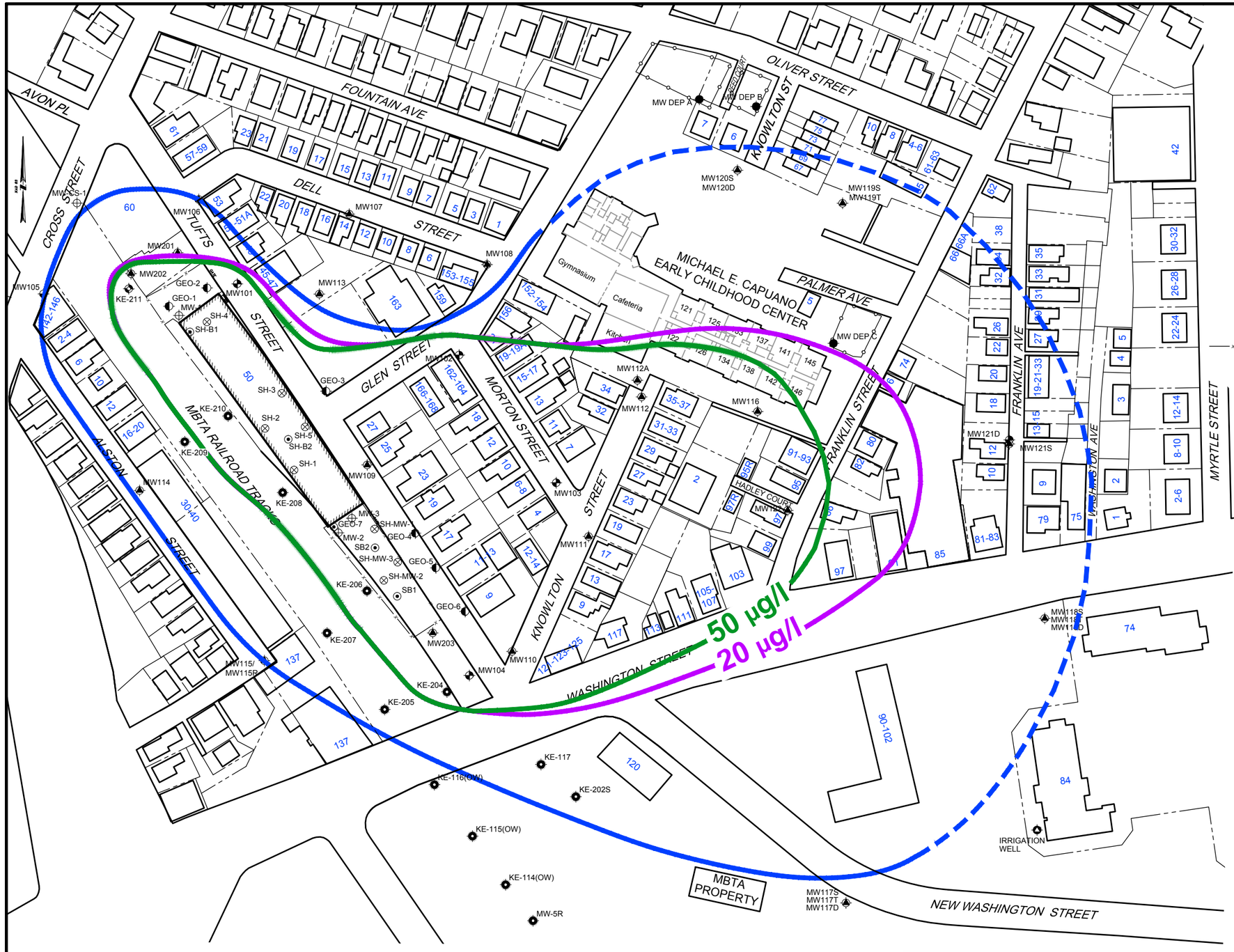
Figures

This Image provided by MassGIS is from U.S.G.S.
Topographic 7.5 X 15 Minute Series
Boston North, MA Quadrangle, 1985.
Datum is National Geodetic Vertical Datum (NGVD).
Contour Interval is 3 Meters.

MASSACHUSETTS
QUADRANGLE LOCATION

Phase V Status Report No. 9 and Remedial Monitoring Report No. 24 50 Tufts Street Somerville, Massachusetts	GEI Consultants	SITE LOCATION MAP
UniFirst Corporation Wilmington, Massachusetts	Project 04516-3	February 2016 Fig. 1-1

N:\04516\#Drafting\04516-3\Phase V SR 9\045163 PhV SR9 Fig 1-1



LEGEND:

- BORING BY KLEINFELDER, MARCH 2014 AND APRIL 2014
- MONITORING WELL BY KLEINFELDER, SEPTEMBER 2012, MARCH 2014, AND APRIL 2014
- MONITORING WELL WITH SOIL VAPOR SAMPLE PORT BY GEI, JANUARY 2007 - JANUARY 2008
- MONITORING WELL BY SANBORN HEAD ASSOCIATES, 2002
- MONITORING WELL BY GEOINSIGHT, JUNE 2004
- SOIL BORING BY GEOINSIGHT, AUGUST 2004
- MONITORING WELL BY GEI, MAY 2006
- DRIVEN POINT MONITORING WELL BY MADEP, MAY 2007
- MONITORING WELL INSTALLED PREVIOUSLY, DATE UNKNOWN
- PREVIOUSLY INSTALLED IRRIGATION WELL
- CHAIN LINK FENCE
- 138 ROOM NUMBER AT CAPUANO SCHOOL
- BOUNDARY OF COMMUNITY GARDENS
- 84 STREET ADDRESS
- MBTA = MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
- DISPOSAL SITE BOUNDARY (DASHED WHERE INFERRED)
- EXTENT OF PCE CONCENTRATION IN SHALLOW GROUNDWATER GREATER THAN OR EQUAL TO 20 µg/l
- EXTENT OF PCE CONCENTRATION IN SHALLOW GROUNDWATER GREATER THAN OR EQUAL TO 50 µg/l
- µg/l = MICROGRAMS PER LITER

GENERAL NOTES:

1. HORIZONTAL CONTROL FOR THIS PLAN WAS ESTABLISHED BY GPS AND IS BASED ON THE NORTH AMERICAN DATUM OF 1983.
2. STREET AND PROPERTY LINES BASED ON SOMERVILLE ASSESSORS' MAPS AND ARE BEST FIT RELATIVE TO THE LOCATION OF THE 50 TUFTS ST. BUILDING.
3. MONITORING WELL LOCATIONS AND ELEVATIONS, AND CAPUANO CENTER COMMUNITY GARDEN LOCATIONS WERE ESTABLISHED BY ON THE GROUND SURVEYS BY BSC GROUP, INC. OR INFORMATION PROVIDED BY KLEINFELDER
4. GEI OBSERVED DECOMMISSIONING OF SH-MW1 AND SH-1 THROUGH SH-5 IN 2007.
5. THE 20 µg/l AND 50 µg/l BOUNDARY LINES ARE BASED ON SHALLOW GROUNDWATER ANALYTICAL RESULTS (0 TO 15 FEET BELOW GROUND SURFACE) COLLECTED THROUGH MAY 2014. KE-204 IS A WELL SCREENED GREATER THAN 15 FEET BELOW GROUND SURFACE, BUT HAS BEEN INCLUDED IN THE 20 µg/l AND 50 µg/l BOUNDARY LINES BECAUSE OF UNCERTAINTY ON THE SHALLOW GROUNDWATER CONCENTRATIONS WITHIN THE IMMEDIATE VICINITY OF THIS WELL.

Phase V Status Report No. 9 and
Remedial Monitoring Report No. 24
50 Tufts Street Somerville, Massachusetts

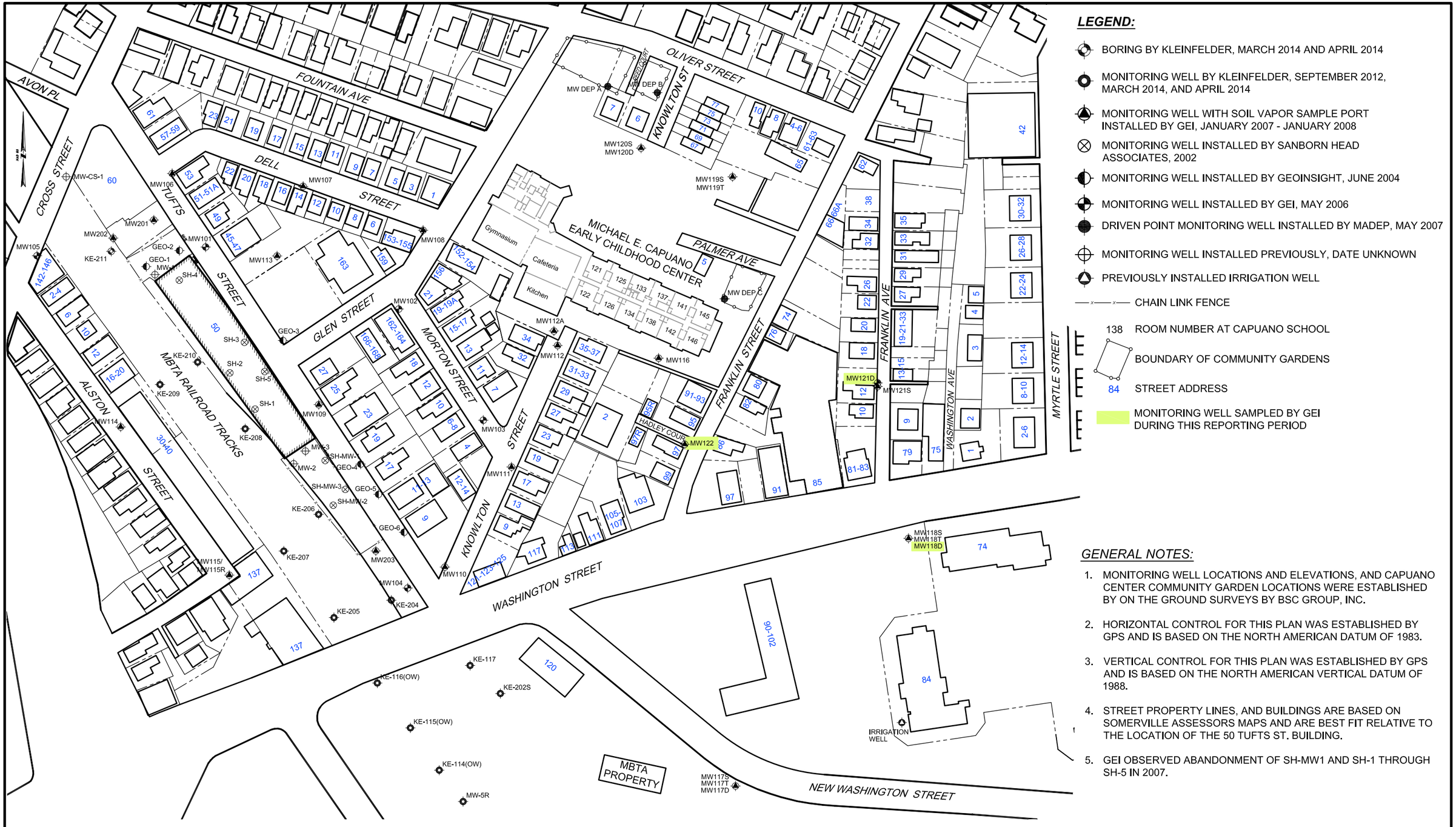
UniFirst Corporation
Wilmington, Massachusetts

GEI Consultants

DISPOSAL SITE MAP
AND SITE BOUNDARY

Project 04516-3 | February 2016 | Fig. 1-2

N:\04516\#Drafting\04516-3\Phase V SR 9\045163 PhV SR9 Fig 1-2



LEGEND:

- BORING BY KLEINFELDER, MARCH 2014 AND APRIL 2014
- MONITORING WELL BY KLEINFELDER, SEPTEMBER 2012, MARCH 2014, AND APRIL 2014
- MONITORING WELL WITH SOIL VAPOR SAMPLE PORT INSTALLED BY GEI, JANUARY 2007 - JANUARY 2008
- MONITORING WELL INSTALLED BY SANBORN HEAD ASSOCIATES, 2002
- MONITORING WELL INSTALLED BY GEOINSIGHT, JUNE 2004
- MONITORING WELL INSTALLED BY GEI, MAY 2006
- DRIVEN POINT MONITORING WELL INSTALLED BY MADEP, MAY 2007
- MONITORING WELL INSTALLED PREVIOUSLY, DATE UNKNOWN
- PREVIOUSLY INSTALLED IRRIGATION WELL
- CHAIN LINK FENCE
- 138 ROOM NUMBER AT CAPUANO SCHOOL
- BOUNDARY OF COMMUNITY GARDENS
- 84 STREET ADDRESS
- MONITORING WELL SAMPLED BY GEI DURING THIS REPORTING PERIOD

GENERAL NOTES:

1. MONITORING WELL LOCATIONS AND ELEVATIONS, AND CAPUANO CENTER COMMUNITY GARDEN LOCATIONS WERE ESTABLISHED BY ON THE GROUND SURVEYS BY BSC GROUP, INC.
2. HORIZONTAL CONTROL FOR THIS PLAN WAS ESTABLISHED BY GPS AND IS BASED ON THE NORTH AMERICAN DATUM OF 1983.
3. VERTICAL CONTROL FOR THIS PLAN WAS ESTABLISHED BY GPS AND IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988.
4. STREET PROPERTY LINES, AND BUILDINGS ARE BASED ON SOMERVILLE ASSESSORS MAPS AND ARE BEST FIT RELATIVE TO THE LOCATION OF THE 50 TUFTS ST. BUILDING.
5. GEI OBSERVED ABANDONMENT OF SH-MW1 AND SH-1 THROUGH SH-5 IN 2007.

Phase V Status Report No. 9 and
Remedial Monitoring Report No. 24
50 Tufts Street Somerville, Massachusetts

UniFirst Corporation
Wilmington, Massachusetts

GEI Consultants

MONITORING WELL LOCATIONS

Project 04516-3 | February 2016 | Fig. 2-1

N:\04516\#Drafting\04516-3\Phase V SR 9\045163 PhV SR9 Fig 2-1

LEGEND:

SOIL VAPOR SAMPLED

INDOOR AIR SAMPLED

0 60 120 240

SCALE, FEET

Phase V Status Report No. 9 and
Remedial Monitoring Report No. 24
50 Tufts Street, Somerville, Massachusetts

UniFirst Corporation
Wilmington, Massachusetts

GEI Consultants

SUB-SLAB SOIL VAPOR AND INDOOR AIR SAMPLING

Project 04516-3 | January 2016 | Fig. 2-2

N:\04516\20.0 GIS Data\Map_Files\Phase IV Status Fig 2-2 IA and SV sampling.mxd

LEGEND:

EPMM STATUS

- EPMM INSTALLED (ACTIVE)
- EPMM INSTALLED (OTHER EPMM)

N

0 45 90 180

SCALE, FEET

Phase V Status Report No. 9 and Remedial Monitoring Report No. 24
50 Tufts Street, Somerville, Massachusetts

UniFirst Corporation
Wilmington, Massachusetts

GEI Consultants

EPMM INSTALLATION PROGRESS

Project 04516-3 | January 2016 | Fig. 4-1

N:\04516\20.0 GIS Data\Map_Files\Tufts_St_GIS_Master_Map.mxd

Preferred Criteria For:

Option 1 (SSDS):

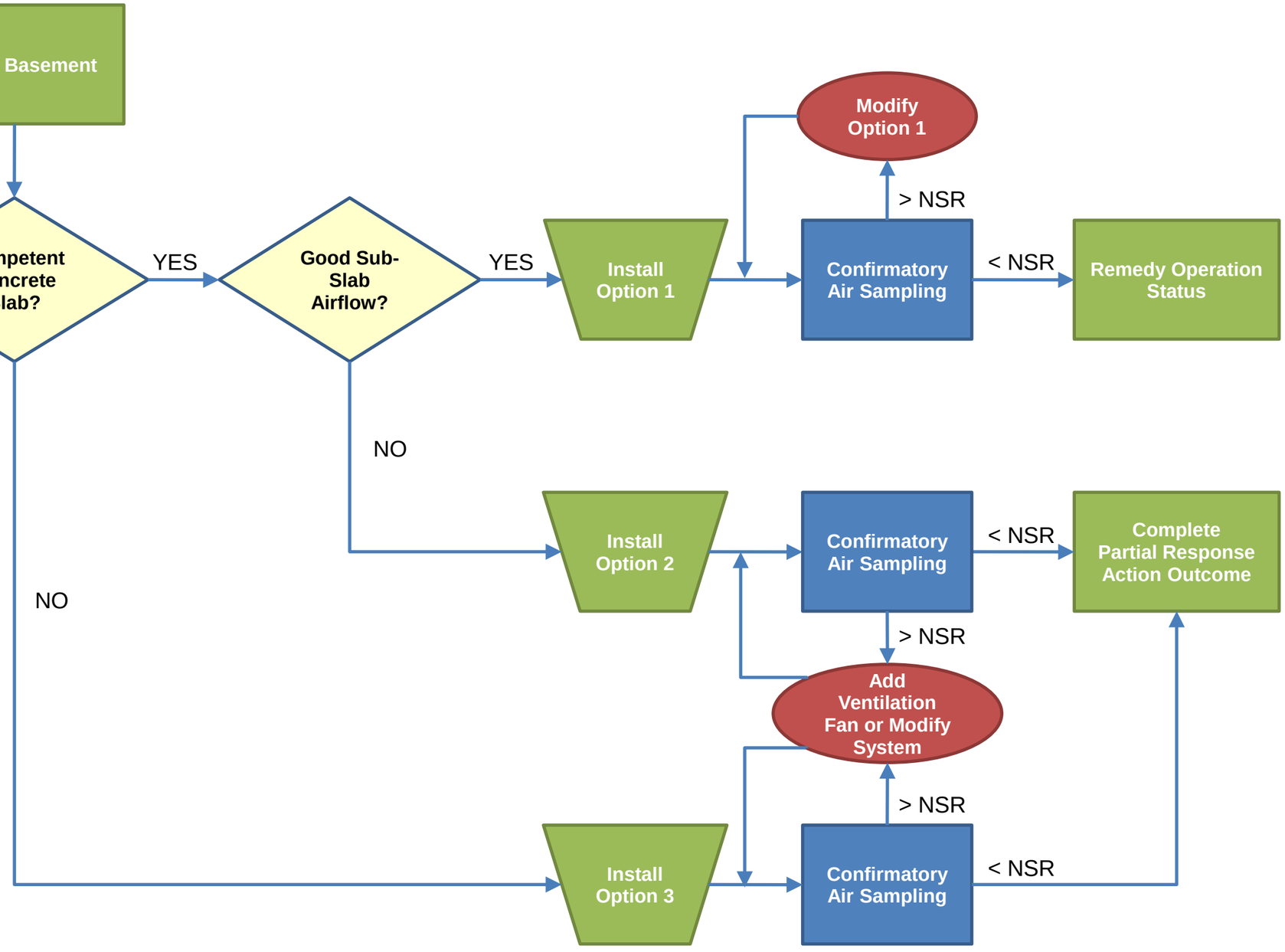
1. Competent concrete slab
2. Poured concrete foundation
3. Granular sub-grade (good sub-slab air flow)

Option 2 (Vapor Trench):

1. Competent concrete slab
2. Silt/clay sub-grade (poor sub-slab air flow)

Option 3 (New Slab Installation):

1. Incompetent concrete slab
2. Silt/clay sub-grade (poor sub-slab air flow)



NSR = No Significant Risk

Phase V Status Report No. 9 and Remedial Monitoring Report No. 24 50 Tufts Street, Somerville, Massachusetts	GEI Consultants	EPMM MITIGATION FLOW CHART
UniFirst Corporation Wilmington, Massachusetts	Project 04516-3	February 2016 Fig. 4-2

CROSS STREET
TUFTS STREET
DELL STREET
GLEN STREET
MORTON STREET
KNOWLTON STREET
WASHINGTON STREET
PALMER AVE
FRANKLIN STREET
FRANKLIN AVE
HADLEY COURT
MYRTLE STREET
WASHINGTON AVE
MICHAEL E. CAPUANO EARLY CHILDHOOD CENTER
Gymnasium
Cafeteria
Kitchen
N

LEGEND:

PERMANENT SOLUTION STATUS

- PERMANENT SOLUTION WITH CONDITIONS PARTIAL STATEMENT SUBMITTED
- PERMANENT SOLUTION WITHOUT CONDITIONS PARTIAL STATEMENT SUBMITTED
- REMEDY OPERATION STATUS
- DISPOSAL SITE BOUNDARY (DASHED WHERE INFERRED)

0 50 100 200
SCALE, FEET

Phase V Status Report No. 9 and
Remedial Monitoring Report No. 24
50 Tufts Street, Somerville, Massachusetts

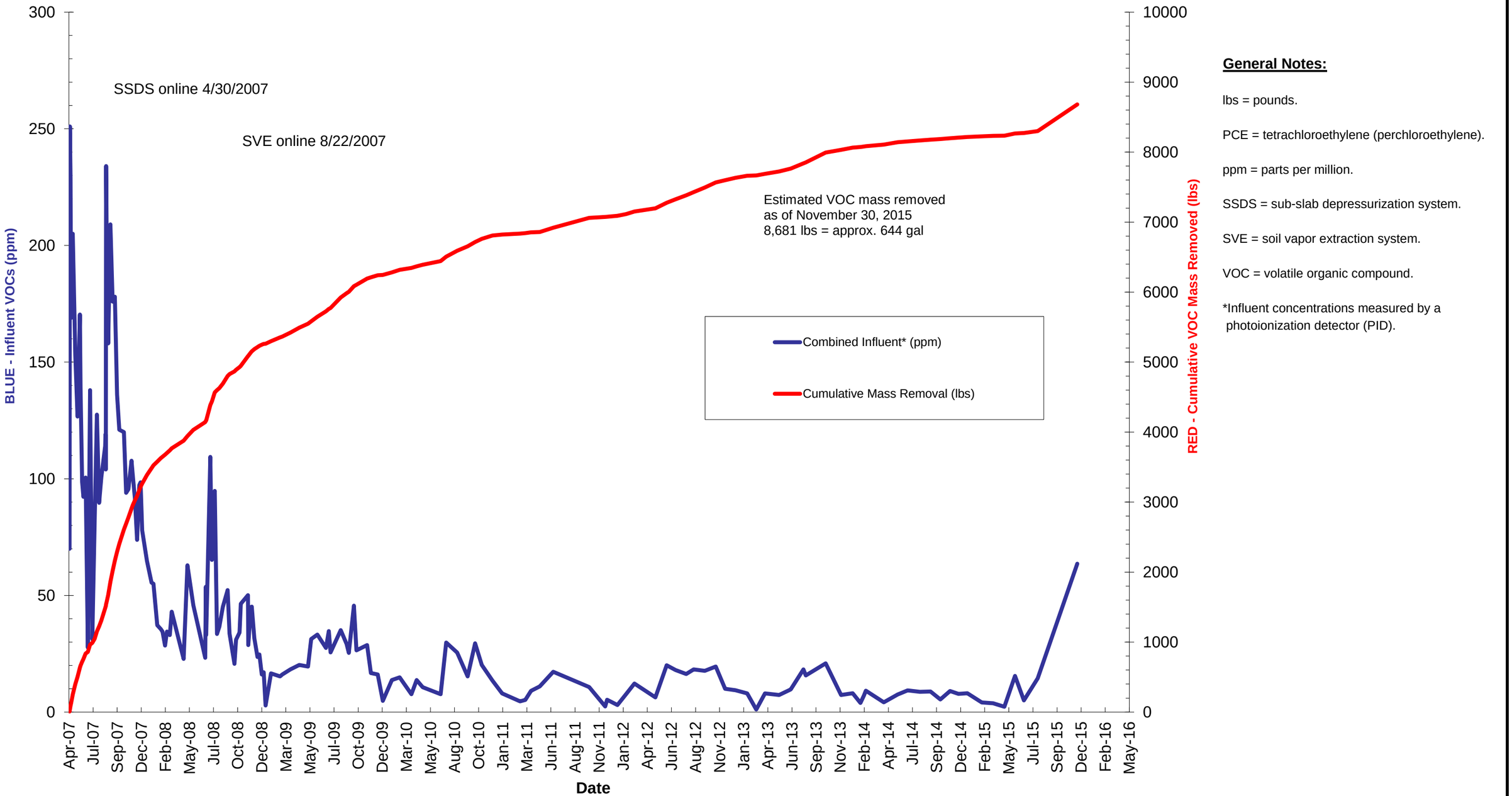
UniFirst Corporation
Wilmington, Massachusetts

GEI Consultants

PERMANENT SOLUTION STATUS

Project 04516-3 | February 2016 | Fig. 4-3

N: \04516\20.0 GIS Data\Map_Files\Tufts_St_RAO_Tracking (for reports).mxd



General Notes:

lbs = pounds.

PCE = tetrachloroethylene (perchloroethylene).

ppm = parts per million.

SSDS = sub-slab depressurization system.

SVE = soil vapor extraction system.

VOC = volatile organic compound.

*Influent concentrations measured by a photoionization detector (PID).

Phase V Status Report No. 9 and Remedial Monitoring Report No. 24 50 Tufts Street, Somerville, Massachusetts	GEI Consultants	COMBINED INFLUENT VOC CONCENTRATIONS AND CUMULATIVE VOC REMOVAL
UniFirst Corporation Wilmington, Massachusetts	Project 04516-3	Febuary 2016 Fig. 6-1

Appendix A

MassDEP Transmittal Forms BWSC-108, BWSC-108A, BWSC-108B and eDEP Transmittal Receipts

Comprehensive Response Action Transmittal Forms:

- **BWSC-108A 1 of 5 (50 Tufts SSDS)**
- **BWSC-108B 1 of 5 (50 Tufts SSDS)**
- **BWSC-108A 2 of 5 (50 Tufts SVE)**
- **BWSC-108B 2 of 5 (50 Tufts SVE)**
- **BWSC-108A 3 of 5 (Capuano Center)**
- **BWSC-108B 3 of 5 (Capuano Center)**
- **BWSC-108A 4 of 5 (Residences)**
- **BWSC-108A 5 of 5 (MNA)**

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC 108

Release Tracking Number
3 - 23246

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

A. SITE LOCATION:

1. Site Name: 50 TUFTS ST & PROP ACROSS THE ST

2. Street Address: 50 TUFTS ST

3. City/Town: SOMERVILLE 4. ZIP Code: 021454129

þ 5. Check here if the disposal site that is the source of the release is Tier Classified. Check the current Tier Classification Category:

€ a. Tier I € b. Tier ID þ c. Tier II

B. THIS FORM IS BEING USED TO: (check all that apply)

€ 1. Submit a **Phase I Completion Statement,** pursuant to 310 CMR 40.0484.

€ 2. Submit a **Revised Phase I Completion Statement,** pursuant to 310 CMR 40.0484.

€ 3. Submit a **Phase II Scope of Work,** pursuant to 310 CMR 40.0834.

€ 4. Submit an **interim Phase II Report.** This report does not satisfy the response action deadline requirements in 310 CMR 40.0500.

€ 5. Submit a **final Phase II Report and Completion Statement,** pursuant to 310 CMR 40.0836.

€ 6. Submit a **Revised Phase II Report and Completion Statement,** pursuant to 310 CMR 40.0836.

€ 7. Submit a **Phase III Remedial Action Plan and Completion Statement,** pursuant to 310 CMR 40.0862.

€ 8. Submit a **Revised Phase III Remedial Action Plan and Completion Statement,** pursuant to 310 CMR 40.0862.

€ 9. Submit a **Phase IV Remedy Implementation Plan,** pursuant to 310 CMR 40.0874.

€ 10. Submit a **Modified Phase IV Remedy Implementation Plan,** pursuant to 310 CMR 40.0874.

€ 11. Submit an **As-Built Construction Report,** pursuant to 310 CMR 40.0875.

€ 12. Submit a **Phase IV Status Report,** pursuant to 310 CMR 40.0877.

€ 13. Submit a **Phase IV Completion Statement,** pursuant to 310 CMR 40.0878 and 40.0879.

Specify the outcome of Phase IV activities: (check one)

€ a. Phase V Operation, Maintenance or Monitoring of the Comprehensive Remedial Action is necessary to achieve a Permanent or Temporary Solution.

€ b. The requirements of a Permanent Solution have been met. A completed Permanent Solution Statement and Report (BWSC104) will be submitted to DEP.

€ c. The requirements of a Temporary Solution have been met. A completed Temporary Solution Statement and Report (BWSC104) will be submitted to DEP.

B. THIS FORM IS BEING USED TO (cont.): (check all that apply)

☐ 14. Submit a **Revised Phase IV Completion Statement,** pursuant to 310 CMR 40.0878 and 40.0879.

☒ 15. Submit a **Phase V Status Report,** pursuant to 310 CMR 40.0892.

☒ 16. Submit a **Remedial Monitoring Report.** (This report can only be submitted through eDEP.)

a. Type of Report: (check one) ☐ i. Initial Report ☒ ii. Interim Report ☐ iii. Final Report

b. Frequency of Submittal: (check all that apply)

☐ i. A Remedial Monitoring Report(s) submitted monthly to address an Imminent Hazard.

☐ ii. A Remedial Monitoring Report(s) submitted monthly to address a Condition of Substantial Release Migration.

☒ iii. A Remedial Monitoring Report(s) submitted every six months, concurrent with a Status Report.

☐ iv. A Remedial Monitoring Report(s) submitted annually, concurrent with a Status Report.

c. Status of Site: (check one) ☐ i. Phase IV ☒ ii. Phase V ☐ iii. Remedy Operation Status ☐ iv. Temporary Solution

d. Number of Remedial Systems and/or Monitoring Programs: 5

A separate BWSC108A, CRA Remedial Monitoring Report, must be filled out for each Remedial System and/or Monitoring Program addressed by this transmittal form.

☐ 17. Submit a **Remedy Operation Status,** pursuant to 310 CMR 40.0893.

☒ 18. Submit a **Status Report to maintain a Remedy Operation Status,** pursuant to 310 CMR 40.0893(2).

☐ 19. Submit a **Transfer and/or a Modification of Persons Maintaining a Remedy Operation Status (ROS),** pursuant to 310 CMR 40.0893(5) (check one, or both, if applicable).

☐ a. Submit a Transfer of Persons Maintaining an ROS (the transferee should be the person listed in Section D, "Person Undertaking Response Actions").

☐ b. Submit a Modification of Persons Maintaining an ROS (the primary representative should be the person listed in Section D, "Person Undertaking Response Actions").

c. Number of Persons Maintaining an ROS not including the primary representative:

☐ 20. Submit a **Termination of a Remedy Operation Status,** pursuant to 310 CMR 40.0893(6).(check one)

☐ a. Submit a notice indicating ROS performance standards have not been met. A plan and timetable pursuant to 310 CMR 40.0893(6)(b) for resuming the ROS are attached.

☐ b. Submit a notice of Termination of ROS.

☐ 21. Submit a **Phase V Completion Statement,** pursuant to 310 CMR 40.0894.

Specify the outcome of Phase V activities: (check one)

☐ a. The requirements of a Permanent Solution have been met. A completed Permanent Solution Statement and Report (BWSC104) will be submitted to DEP.

☐ b. The requirements for a Temporary Solution have been met. A completed Temporary Solution Statement and Report (BWSC104) will be submitted to DEP.

☐ 22. Submit a **Revised Phase V Completion Statement,** pursuant to 310 CMR 40.0894.

☐ 23. Submit a **Temporary Solution Status Report,** pursuant to 310 CMR 40.0898.

☐ 24. Submit a **Plan for the Application of Remedial Additives** near a sensitive receptor, pursuant to 310 CMR 40.0046(3).

a. Status of Site: (check one)

☐ i. Phase IV ☐ ii. Phase V ☐ iii. Remedy Operation Status ☐ iv. Temporary Solution

C. LSP SIGNATURE AND STAMP:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

> *if Section B indicates that a* ***Phase I, Phase II, Phase III, Phase IV or Phase V Completion Statement*** *and/or a* ***Termination of a Remedy Operation Status*** *is being submitted,* the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> *if Section B indicates that a* ***Phase II Scope of Work*** *or a* ***Phase IV Remedy Implementation Plan*** *is being submitted,* the response action (s) that is (are) the subject of this submittal (i) has (have) been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> *if Section B indicates that an* ***As-Built Construction Report,*** *a* ***Remedy Operation Status,*** *a* ***Phase IV, Phase V or Temporary Solution Status Report,*** *a* ***Status Report to Maintain a Remedy Operation Status,*** *a* ***Transfer or Modification of Persons Maintaining a Remedy Operation Status*** *and/or a* ***Remedial Monitoring Report*** *is being submitted,* the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. LSP#: 9719

2. First Name: ILEEN S 3. Last Name: GLADSTONE

4. Telephone: 781-721-4012 5. Ext.: 6. Email: igladstone@geiconsultants.com

7. Signature:

8. Date: (mm/dd/yyyy)

9. LSP Stamp:

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

D. PERSON UNDERTAKING RESPONSE ACTIONS:

1. Check all that apply: ☐ a. change in contact name ☐ b. change of address ☐ c. change in the person undertaking response actions

2. Name of Organization: UNIFIRST CORPORATION

3. Contact First Name: TIMOTHY 4. Last Name: COSGRAVE

5. Street: 68 JONSPIN RD 6. Title: SENIOR MGR EH&S

7. City/Town: WILMINGTON 8. State: MA 9. ZIP Code: 018871090

10. Telephone: 978-658-8888 11. Ext: 4332 12. Email:

E. RELATIONSHIP TO SITE OF PERSON UNDERTAKING RESPONSE ACTIONS:

☐ Check here to change relationship

☒ 1. RP or PRP ☐ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter

☒ e. Other RP or PRP Specify: OTHER PRPS

☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

☐ 4. Any Other Person Undertaking Response Actions Specify Relationship:

F. REQUIRED ATTACHMENT AND SUBMITTALS:

☐ 1. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.

☒ 2. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the submittal of any Phase Reports to DEP.

☒ 3. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the availability of a Phase III Remedial Action Plan.

☒ 4. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the availability of a Phase IV Remedy Implementation Plan.

☒ 5. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of any field work involving the implementation of a Phase IV Remedial Action.

☐ 6. If submitting a Transfer of a Remedy Operation Status (as per 310 CMR 40.0893(5)), check here to certify that a statement detailing the compliance history for the person making this submittal (transferee) is attached.

☐ 7. If submitting a Modification of a Remedy Operation Status (as per 310 CMR 40.0893(5)), check here to certify that a statement detailing the compliance history for each new person making this submittal is attached.

☐ 8. Check here if any non-updatable information provided on this form is incorrect, e.g. Release Address/Location Aid. Send corrections to: BWSC.eDEP@state.ma.us.

☒ 9. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT
Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

G. CERTIFICATION OF PERSON UNDERTAKING RESPONSE ACTIONS:

1. I, _____, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

>*if Section B indicates that this is a* **Modification of a Remedy Operation Status (ROS),** I attest under the pains and penalties of perjury that I am fully authorized to act on behalf of all persons performing response actions under the ROS as stated in 310 CMR 40.0893(5)(d) to receive oral and written correspondence from MassDEP with respect to performance of response actions under the ROS, and to receive a statement of fee amount as per 4.03(3).

I understand that any material received by the Primary Representative from MassDEP shall be deemed received by all the persons performing response actions under the ROS, and I am aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate or incomplete information.

2. By: _____ (Signature)

3. Title: SENIOR MGR EH&S

4. For: UNIFIRST CORPORATION (Name of person or entity recorded in Section D)

5. Date: _____ (mm/dd/yyyy)

€ 6. Check here if the address of the person providing certification is different from address recorded in Section D.

7. Street: _____

8. City/Town: _____ 9. State: _____ 10. ZIP Code: _____

11. Telephone: _____ 12. Ext.: _____ 13. Email: _____

YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO $10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.

Date Stamp (DEP USE ONLY:)

Additional supporting information for:

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

BWSC-108, Section B, Question 15 and 18: Submit a **Phase V Status Report and Status Report to maintain a Remedy Operation Status**, pursuant to 310 CMR 40.0893(2).

The Phase V Status Report and Status Report to maintain ROS has been submitted via eDEP, Transmittal No. 799773 as part of the "Phase V Status Report No. 9 and Remedial Monitoring Report No. 24," RTN 3-23246, 50 Tufts Street, Somerville, Massachusetts, dated February 2, 2016.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT
Pursuant to 310 CMR 40.0800 (SUBPART H)
Remedial System or Monitoring Program: 1 of: 5

BWSC108 -A

Release Tracking Number
3 - 23246

A. DESCRIPTION OF ACTIVE OPERATION AND MAINTENANCE ACTIVITY:

1. Type of Active Operation and Maintenance Activity: (check all that apply)

þ a. Active Remedial System: (check all that apply)

¢ i. NAPL Recovery ¢ ii. Soil Vapor Extraction/Bioventing ¢ iii. Vapor-phase Carbon Adsorption
¢ iv. Groundwater Recovery ¢ v. Dual/Multi-phase Extraction ¢ vi. Aqueous-phase Carbon Adsorption
¢ vii. Air Stripping ¢ viii. Sparging/Biosparging ¢ ix. Cat/Thermal Oxidation
þ x. Other Describe: SUB-SLAB DEPRESSURIZATION SYSTEM

¢ b. Active Exposure Pathway Elimination Measure
Active Exposure Pathway Mitigation System to address (check one): ¢ i. Indoor Air ¢ ii. Drinking Water

¢ c. Application of Remedial Additives: (check all that apply)

¢ i. To the Subsurface ¢ ii. To Groundwater (Injection) ¢ iii. To the Surface

¢ d. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section G5)

¢ i. Reactive Wall ¢ ii. Natural Attenuation ¢ iii. Other Describe:

2. Mode of Operation: (check one)

þ a. Continuous ¢ b. Intermittent ¢ c. Pulsed ¢ d. One-time Event Only ¢ e. Other:

3. System Effluent/Discharge: (check all that apply)

¢ a. Sanitary Sewer/POTW
¢ b. Groundwater Re-infiltration/Re-injection: (check one) ¢ i. Downgradient ¢ ii. Upgradient
þ c. Vapor-phase Discharge to Ambient Air: (check one) þ i. Off-gas Controls ¢ ii. No Off-gas Controls
¢ d. Drinking Water Supply
¢ e. Surface Water (including Storm Drains)
¢ f. Other Describe:

B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal: From: 6/16/2015 (mm/dd/yyyy) To: 12/15/2015 (mm/dd/yyyy)

2. Number of monitoring events during the reporting period: (check one)

¢ a. System Startup: (if applicable)

¢ i. Days 1, 3, 6, and then weekly thereafter, for the first month.
¢ ii. Other Describe:

þ b. Post-system Startup (after first month) or Monitoring Program:

¢ i. Monthly
þ ii. Quarterly
¢ iii. Annually
¢ iv. Other Describe:

þ 3. Check here to certify that the number of required monitoring events were conducted during the reporting period.

C. EFFLUENT/DISCHARGE REGULATION: (check one to indicate how the effluent/discharge limits were established)

¢ 1. NPDES: (check one) ¢ a. Remediation General Permit ¢ b. Individual Permit
¢ c. Emergency Exclusion Effective Date of Permit: (mm/dd/yyyy)

þ 2. MCP Performance Standard MCP Citations(s): WSC_94-150

¢ 3. DEP Approval Letter Date of Letter: (mm/dd/yyyy)

¢ 4. Other Describe:

D. WASTEWATER TREATMENT PLANT OPERATOR: (check one)

- ☐ 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.
  a. Name: _____ b. Grade: _____
  c. License No: _____ d. License Exp. Date: _____ (mm/dd/yyyy)
- ☐ 2. Not Required
- ☒ 3. Not Applicable

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (check all that apply)

- ☒ 1. The Active Remedial System was functional one or more days during the Reporting Period.
  a. Days System was Fully Functional: 182 b. GW Recovered (gals): _____
  c. NAPL Recovered (gals): _____ d. GW Discharged (gals): _____
  e. Avg. Soil Gas Recovery Rate (scfm): 336 f. Avg. Sparging Rate (scfm): _____
- ☐ 2. Remedial Additives: (check all that apply)
  - ☐ a. No Remedial Additives applied during the Reporting Period.
  - ☐ b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)
    - ☐ i. Nitrogen/Phosphorus:

Name of Additive	Date	Quantity	Units

    - ☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

    - ☐ iii. Microorganisms:

Name of Additive	Date	Quantity	Units

    - ☐ iv. Other:

Name of Additive	Date	Quantity	Units

  - ☐ c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)
    - ☐ i. Permanganates:

Name of Additive	Date	Quantity	Units

    - ☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

    - ☐ iii. Persulfates:

Name of Additive	Date	Quantity	Units

    - ☐ iv. Other:

Name of Additive	Date	Quantity	Units

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (cont.)

¿ d. Other additives applied: (total quantity applied at the site for the current reporting period)

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

¿ e. Check here if any additional Remedial Additives were applied. Attach list of additional additives and include Name of Additive, Date Applied, Quantity Applied and Units (in gals. or lbs.)

F. SHUTDOWNS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM: (check all that apply)

¿ 1. The Active Remedial System had unscheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Unscheduled Shutdowns: _____ b. Total Number of Days of Unscheduled Shutdowns: _____

c. Reason(s) for Unscheduled Shutdowns: _____

¿ 2. The Active Remedial System had scheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Scheduled Shutdowns: _____ b. Total Number of Days of Scheduled Shutdowns: _____

c. Reason(s) for Scheduled Shutdowns: _____

¿ 3. The Active Remedial System or Active Remedial Monitoring Program was permanently shutdown/discontinued during the Reporting Period.

a. Date of Final System or Monitoring Program Shutdown: _____
(mm/dd/yyyy)

¿ b. No Further Effluent Discharges.

¿ c. No Further Application of Remedial Additives planned; sufficient monitoring completed to demonstrate compliance with 310 CMR 40.0046.

¿ d. No Further Submittals Planned.

¿ e. Other: Describe: _____

G. SUMMARY STATEMENTS: (check all that apply for the current reporting period)

þ 1. All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

þ 2. There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

þ 3. The Active Remedial System or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

4. Indicate any Operational Problems or Notes:

¿ 5. Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT
MEASUREMENTS
Pursuant to 310 CMR 40.0800 (SUBPART H)
Remedial System or Monitoring Program: 1 of: 5

BWSC108 -B

Release Tracking Number
3 23246

For each Point of Measurement, related to concentration indicate the highest concentration detected during the reporting period, of each oil, hazardous material and/or remedial additive.
For each Point of Measurement for pressure differentials, indicate the lowest pressure differential detected during the reporting period.

Point of Measurement	Date (mm/dd/yyyy)	Contaminant, Measurement and/or Indicator Parameter	Influent Concentration (where applicable)	Midpoint Concentration (where applicable)	(check one) Discharge / GroundWater Concentration / Pressure Differential	Check here, if ND/BD	Permissible Concentration or Pressure Differential	Units	Within Permissible Limits? (Y/N)
SSDS	06/17/2015	TOTAL VOCS	5.0		0.0	☒	0.250	PPMV	YES
SSDS	07/30/2015	TOTAL VOCS	14.5		0.1	☐	0.725	PPMV	YES
SSDS	11/30/2015	TOTAL VOCS	63.6		0.3	☐	3.180	PPMV	YES

☐ Check here if any additional BWSC108 B, Measurements Form(s), are needed.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT
Pursuant to 310 CMR 40.0800 (SUBPART H)
Remedial System or Monitoring Program: 2 of: 5

BWSC108 -A

Release Tracking Number
3 - 23246

A. DESCRIPTION OF ACTIVE OPERATION AND MAINTENANCE ACTIVITY:

1. Type of Active Operation and Maintenance Activity: (check all that apply)

þ a. Active Remedial System: (check all that apply)

¨ i. NAPL Recovery þ ii. Soil Vapor Extraction/Bioventing ¨ iii. Vapor-phase Carbon Adsorption
¨ iv. Groundwater Recovery ¨ v. Dual/Multi-phase Extraction ¨ vi. Aqueous-phase Carbon Adsorption
¨ vii. Air Stripping ¨ viii. Sparging/Biosparging ¨ ix. Cat/Thermal Oxidation
¨ x. Other Describe: _____

¨ b. Active Exposure Pathway Elimination Measure
Active Exposure Pathway Mitigation System to address (check one): ¨ i. Indoor Air ¨ ii. Drinking Water

¨ c. Application of Remedial Additives: (check all that apply)

¨ i. To the Subsurface ¨ ii. To Groundwater (Injection) ¨ iii. To the Surface

¨ d. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section G5)

¨ i. Reactive Wall ¨ ii. Natural Attenuation ¨ iii. Other Describe: _____

2. Mode of Operation: (check one)

þ a. Continuous ¨ b. Intermittent ¨ c. Pulsed ¨ d. One-time Event Only ¨ e. Other: _____

3. System Effluent/Discharge: (check all that apply)

¨ a. Sanitary Sewer/POTW
¨ b. Groundwater Re-infiltration/Re-injection: (check one) ¨ i. Downgradient ¨ ii. Upgradient
þ c. Vapor-phase Discharge to Ambient Air: (check one) þ i. Off-gas Controls ¨ ii. No Off-gas Controls
¨ d. Drinking Water Supply
¨ e. Surface Water (including Storm Drains)
¨ f. Other Describe: _____

B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal: From: 6/16/2015 (mm/dd/yyyy) To: 12/15/2015 (mm/dd/yyyy)

2. Number of monitoring events during the reporting period: (check one)

¨ a. System Startup: (if applicable)

¨ i. Days 1, 3, 6, and then weekly thereafter, for the first month.
¨ ii. Other Describe: _____

þ b. Post-system Startup (after first month) or Monitoring Program:

¨ i. Monthly
þ ii. Quarterly
¨ iii. Annually
¨ iv. Other Describe: _____

þ 3. Check here to certify that the number of required monitoring events were conducted during the reporting period.

C. EFFLUENT/DISCHARGE REGULATION: (check one to indicate how the effluent/discharge limits were established)

¨ 1. NPDES: (check one) ¨ a. Remediation General Permit ¨ b. Individual Permit
¨ c. Emergency Exclusion Effective Date of Permit: _____ (mm/dd/yyyy)

þ 2. MCP Performance Standard MCP Citations(s): WSC-94-150

¨ 3. DEP Approval Letter Date of Letter: _____ (mm/dd/yyyy)

¨ 4. Other Describe: _____

D. WASTEWATER TREATMENT PLANT OPERATOR: (check one)

- ☐ 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.
  a. Name: _____ b. Grade: _____
  c. License No: _____ d. License Exp. Date: _____ (mm/dd/yyyy)
- ☐ 2. Not Required
- ☒ 3. Not Applicable

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (check all that apply)

- ☒ 1. The Active Remedial System was functional one or more days during the Reporting Period.
  a. Days System was Fully Functional: 182 b. GW Recovered (gals): _____
  c. NAPL Recovered (gals): _____ d. GW Discharged (gals): _____
  e. Avg. Soil Gas Recovery Rate (scfm): 336 f. Avg. Sparging Rate (scfm): _____
- ☐ 2. Remedial Additives: (check all that apply)
  - ☐ a. No Remedial Additives applied during the Reporting Period.
  - ☐ b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)
    - ☐ i. Nitrogen/Phosphorus:

Name of Additive	Date	Quantity	Units

    - ☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

    - ☐ iii. Microorganisms:

Name of Additive	Date	Quantity	Units

    - ☐ iv. Other:

Name of Additive	Date	Quantity	Units

  - ☐ c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)
    - ☐ i. Permanganates:

Name of Additive	Date	Quantity	Units

    - ☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

    - ☐ iii. Persulfates:

Name of Additive	Date	Quantity	Units

    - ☐ iv. Other:

Name of Additive	Date	Quantity	Units

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (cont.)

¿ d. Other additives applied: (total quantity applied at the site for the current reporting period)

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

¿ e. Check here if any additional Remedial Additives were applied. Attach list of additional additives and include Name of Additive, Date Applied, Quantity Applied and Units (in gals. or lbs.)

F. SHUTDOWNS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM: (check all that apply)

¿ 1. The Active Remedial System had unscheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Unscheduled Shutdowns: _____ b. Total Number of Days of Unscheduled Shutdowns: _____

c. Reason(s) for Unscheduled Shutdowns: _____

¿ 2. The Active Remedial System had scheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Scheduled Shutdowns: _____ b. Total Number of Days of Scheduled Shutdowns: _____

c. Reason(s) for Scheduled Shutdowns: _____

¿ 3. The Active Remedial System or Active Remedial Monitoring Program was permanently shutdown/discontinued during the Reporting Period.

a. Date of Final System or Monitoring Program Shutdown: _____
(mm/dd/yyyy)

¿ b. No Further Effluent Discharges.

¿ c. No Further Application of Remedial Additives planned; sufficient monitoring completed to demonstrate compliance with 310 CMR 40.0046.

¿ d. No Further Submittals Planned.

¿ e. Other: Describe: _____

G. SUMMARY STATEMENTS: (check all that apply for the current reporting period)

þ 1. All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

þ 2. There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

þ 3. The Active Remedial System or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

4. Indicate any Operational Problems or Notes:

¿ 5. Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT
MEASUREMENTS
Pursuant to 310 CMR 40.0800 (SUBPART H)
Remedial System or Monitoring Program: 2 of: 5

BWSC108 -B

Release Tracking Number
3 23246

For each Point of Measurement, related to concentration indicate the highest concentration detected during the reporting period, of each oil, hazardous material and/or remedial additive.
For each Point of Measurement for pressure differentials, indicate the lowest pressure differential detected during the reporting period.

Point of Measurement	Date (mm/dd/yyyy)	Contaminant, Measurement and/or Indicator Parameter	Influent Concentration (where applicable)	Midpoint Concentration (where applicable)	(check one) Discharge / GroundWater Concentration / Pressure Differential	Check here, if ND/BD	Permissible Concentration or Pressure Differential	Units	Within Permissible Limits? (Y/N)
SVE	06/17/2015	TOTAL VOCS	5.0		0.0	☒	0.250	PPMV	YES
SVE	07/30/2015	TOTAL VOCS	14.5		0.1	☐	0.725	PPMV	YES
SVE	11/30/2015	TOTAL VOCS	63.6		0.3	☐	3.180	PPMV	YES

☐ Check here if any additional BWSC108 B, Measurements Form(s), are needed.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT
Pursuant to 310 CMR 40.0800 (SUBPART H)
Remedial System or Monitoring Program: 3 of: 5

BWSC108 -A

Release Tracking Number
3 - 23246

A. DESCRIPTION OF ACTIVE OPERATION AND MAINTENANCE ACTIVITY:

1. Type of Active Operation and Maintenance Activity: (check all that apply)

- ☐ a. Active Remedial System: (check all that apply)
  - ☐ i. NAPL Recovery ☐ ii. Soil Vapor Extraction/Bioventing ☐ iii. Vapor-phase Carbon Adsorption
  - ☐ iv. Groundwater Recovery ☐ v. Dual/Multi-phase Extraction ☐ vi. Aqueous-phase Carbon Adsorption
  - ☐ vii. Air Stripping ☐ viii. Sparging/Biosparging ☐ ix. Cat/Thermal Oxidation
  - ☐ x. Other Describe: _____
- ☒ b. Active Exposure Pathway Elimination Measure
  Active Exposure Pathway Mitigation System to address (check one): ☒ i. Indoor Air ☐ ii. Drinking Water
- ☐ c. Application of Remedial Additives: (check all that apply)
  - ☐ i. To the Subsurface ☐ ii. To Groundwater (Injection) ☐ iii. To the Surface
- ☐ d. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section G5)
  - ☐ i. Reactive Wall ☐ ii. Natural Attenuation ☐ iii. Other Describe: _____

2. Mode of Operation: (check one)

☒ a. Continuous ☐ b. Intermittent ☐ c. Pulsed ☐ d. One-time Event Only ☐ e. Other: _____

3. System Effluent/Discharge: (check all that apply)

- ☐ a. Sanitary Sewer/POTW
- ☐ b. Groundwater Re-infiltration/Re-injection: (check one) ☐ i. Downgradient ☐ ii. Upgradient
- ☒ c. Vapor-phase Discharge to Ambient Air: (check one) ☐ i. Off-gas Controls ☒ ii. No Off-gas Controls
- ☐ d. Drinking Water Supply
- ☐ e. Surface Water (including Storm Drains)
- ☐ f. Other Describe: _____

B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal: From: 6/16/2015 (mm/dd/yyyy) To: 12/15/2015 (mm/dd/yyyy)

2. Number of monitoring events during the reporting period: (check one)

- ☐ a. System Startup: (if applicable)
  - ☐ i. Days 1, 3, 6, and then weekly thereafter, for the first month.
  - ☐ ii. Other Describe: _____
- ☒ b. Post-system Startup (after first month) or Monitoring Program:
  - ☐ i. Monthly
  - ☒ ii. Quarterly
  - ☐ iii. Annually
  - ☐ iv. Other Describe: _____

☒ 3. Check here to certify that the number of required monitoring events were conducted during the reporting period.

C. EFFLUENT/DISCHARGE REGULATION: (check one to indicate how the effluent/discharge limits were established)

☐ 1. NPDES: (check one) ☐ a. Remediation General Permit ☐ b. Individual Permit
☐ c. Emergency Exclusion Effective Date of Permit: _____ (mm/dd/yyyy)

☒ 2. MCP Performance Standard MCP Citations(s): WSC-94-150

☐ 3. DEP Approval Letter Date of Letter: _____ (mm/dd/yyyy)

☐ 4. Other Describe: _____

D. WASTEWATER TREATMENT PLANT OPERATOR: (check one)

- ☐ 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.
  a. Name: _____ b. Grade: _____
  c. License No: _____ d. License Exp. Date: _____ (mm/dd/yyyy)
- ☐ 2. Not Required
- ☒ 3. Not Applicable

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (check all that apply)

- ☒ 1. The Active Remedial System was functional one or more days during the Reporting Period.
  a. Days System was Fully Functional: 182 b. GW Recovered (gals): _____
  c. NAPL Recovered (gals): _____ d. GW Discharged (gals): _____
  e. Avg. Soil Gas Recovery Rate (scfm): 69.3 f. Avg. Sparging Rate (scfm): _____
- ☐ 2. Remedial Additives: (check all that apply)
  - ☐ a. No Remedial Additives applied during the Reporting Period.
  - ☐ b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)
    - ☐ i. Nitrogen/Phosphorus:

Name of Additive	Date	Quantity	Units

    - ☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

    - ☐ iii. Microorganisms:

Name of Additive	Date	Quantity	Units

    - ☐ iv. Other:

Name of Additive	Date	Quantity	Units

  - ☐ c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)
    - ☐ i. Permanganates:

Name of Additive	Date	Quantity	Units

    - ☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

    - ☐ iii. Persulfates:

Name of Additive	Date	Quantity	Units

    - ☐ iv. Other:

Name of Additive	Date	Quantity	Units

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (cont.)

¿ d. Other additives applied: (total quantity applied at the site for the current reporting period)

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

¿ e. Check here if any additional Remedial Additives were applied. Attach list of additional additives and include Name of Additive, Date Applied, Quantity Applied and Units (in gals. or lbs.)

F. SHUTDOWNS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM: (check all that apply)

¿ 1. The Active Remedial System had unscheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Unscheduled Shutdowns: _____ b. Total Number of Days of Unscheduled Shutdowns: _____

c. Reason(s) for Unscheduled Shutdowns: _____

¿ 2. The Active Remedial System had scheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Scheduled Shutdowns: _____ b. Total Number of Days of Scheduled Shutdowns: _____

c. Reason(s) for Scheduled Shutdowns: _____

¿ 3. The Active Remedial System or Active Remedial Monitoring Program was permanently shutdown/discontinued during the Reporting Period.

a. Date of Final System or Monitoring Program Shutdown: _____
(mm/dd/yyyy)

¿ b. No Further Effluent Discharges.

¿ c. No Further Application of Remedial Additives planned; sufficient monitoring completed to demonstrate compliance with 310 CMR 40.0046.

¿ d. No Further Submittals Planned.

¿ e. Other: Describe: _____

G. SUMMARY STATEMENTS: (check all that apply for the current reporting period)

þ 1. All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

þ 2. There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

þ 3. The Active Remedial System or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

4. Indicate any Operational Problems or Notes:

¿ 5. Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT
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Pursuant to 310 CMR 40.0800 (SUBPART H)
Remedial System or Monitoring Program: 3 of: 5

BWSC108 -B

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For each Point of Measurement, related to concentration indicate the highest concentration detected during the reporting period, of each oil, hazardous material and/or remedial additive.
For each Point of Measurement for pressure differentials, indicate the lowest pressure differential detected during the reporting period.

Point of Measurement	Date (mm/dd/yyyy)	Contaminant, Measurement and/or Indicator Parameter	Influent Concentration (where applicable)	Midpoint Concentration (where applicable)	(check one) Discharge / GroundWater Concentration / Pressure Differential	Check here, if ND/BD	Permissible Concentration or Pressure Differential	Units	Within Permissible Limits? (Y/N)
SSDS	06/17/2015	TOTAL VOCS	0.1			☐	8.0	PPMV	YES
SSDS	07/30/2015	TOTAL VOCS	0.2			☐	8.0	PPMV	YES
SSDS	11/30/2015	TOTAL VOCS	0.0			☒	8.0	PPMV	YES

☐ Check here if any additional BWSC108 B, Measurements Form(s), are needed.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT
Pursuant to 310 CMR 40.0800 (SUBPART H)
Remedial System or Monitoring Program: 4 of: 5

BWSC108 -A

Release Tracking Number
3 - 23246

A. DESCRIPTION OF ACTIVE OPERATION AND MAINTENANCE ACTIVITY:

1. Type of Active Operation and Maintenance Activity: (check all that apply)

- ☐ a. Active Remedial System: (check all that apply)
  - ☐ i. NAPL Recovery
  - ☐ ii. Soil Vapor Extraction/Bioventing
  - ☐ iii. Vapor-phase Carbon Adsorption
  - ☐ iv. Groundwater Recovery
  - ☐ v. Dual/Multi-phase Extraction
  - ☐ vi. Aqueous-phase Carbon Adsorption
  - ☐ vii. Air Stripping
  - ☐ viii. Sparging/Biosparging
  - ☐ ix. Cat/Thermal Oxidation
  - ☐ x. Other Describe:
- ☒ b. Active Exposure Pathway Elimination Measure
  Active Exposure Pathway Mitigation System to address (check one): ☒ i. Indoor Air ☐ ii. Drinking Water
- ☐ c. Application of Remedial Additives: (check all that apply)
  - ☐ i. To the Subsurface
  - ☐ ii. To Groundwater (Injection)
  - ☐ iii. To the Surface
- ☐ d. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section G5)
  - ☐ i. Reactive Wall
  - ☐ ii. Natural Attenuation
  - ☐ iii. Other Describe:

2. Mode of Operation: (check one)

☒ a. Continuous ☐ b. Intermittent ☐ c. Pulsed ☐ d. One-time Event Only ☐ e. Other:

3. System Effluent/Discharge: (check all that apply)

- ☐ a. Sanitary Sewer/POTW
- ☐ b. Groundwater Re-infiltration/Re-injection: (check one) ☐ i. Downgradient ☐ ii. Upgradient
- ☒ c. Vapor-phase Discharge to Ambient Air: (check one) ☐ i. Off-gas Controls ☒ ii. No Off-gas Controls
- ☐ d. Drinking Water Supply
- ☐ e. Surface Water (including Storm Drains)
- ☐ f. Other Describe:

B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal: From: 6/16/2015 (mm/dd/yyyy) To: 12/15/2015 (mm/dd/yyyy)

2. Number of monitoring events during the reporting period: (check one)

- ☐ a. System Startup: (if applicable)
  - ☐ i. Days 1, 3, 6, and then weekly thereafter, for the first month.
  - ☐ ii. Other Describe:
- ☒ b. Post-system Startup (after first month) or Monitoring Program:
  - ☐ i. Monthly
  - ☐ ii. Quarterly
  - ☐ iii. Annually
  - ☒ iv. Other Describe: 60 TUFTS ST QUARTERLY, OTHER PROPERTIES ANNUALLY

☒ 3. Check here to certify that the number of required monitoring events were conducted during the reporting period.

C. EFFLUENT/DISCHARGE REGULATION: (check one to indicate how the effluent/discharge limits were established)

☐ 1. NPDES: (check one) ☐ a. Remediation General Permit ☐ b. Individual Permit ☐ c. Emergency Exclusion
Effective Date of Permit: (mm/dd/yyyy)

☒ 2. MCP Performance Standard MCP Citations(s): WSC-94-150

☐ 3. DEP Approval Letter Date of Letter: (mm/dd/yyyy)

☐ 4. Other Describe:

D. WASTEWATER TREATMENT PLANT OPERATOR: (check one)

- ☐ 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.
  a. Name: _____ b. Grade: _____
  c. License No: _____ d. License Exp. Date: _____ (mm/dd/yyyy)
- ☐ 2. Not Required
- ☒ 3. Not Applicable

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (check all that apply)

- ☒ 1. The Active Remedial System was functional one or more days during the Reporting Period.
  a. Days System was Fully Functional: 182 b. GW Recovered (gals): _____
  c. NAPL Recovered (gals): _____ d. GW Discharged (gals): _____
  e. Avg. Soil Gas Recovery Rate (scfm): 87.00 f. Avg. Sparging Rate (scfm): _____
- ☐ 2. Remedial Additives: (check all that apply)
  - ☐ a. No Remedial Additives applied during the Reporting Period.
  - ☐ b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)
    - ☐ i. Nitrogen/Phosphorus:

Name of Additive	Date	Quantity	Units

    - ☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

    - ☐ iii. Microorganisms:

Name of Additive	Date	Quantity	Units

    - ☐ iv. Other:

Name of Additive	Date	Quantity	Units

  - ☐ c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)
    - ☐ i. Permanganates:

Name of Additive	Date	Quantity	Units

    - ☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

    - ☐ iii. Persulfates:

Name of Additive	Date	Quantity	Units

    - ☐ iv. Other:

Name of Additive	Date	Quantity	Units

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (cont.)

¿ d. Other additives applied: (total quantity applied at the site for the current reporting period)

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

¿ e. Check here if any additional Remedial Additives were applied. Attach list of additional additives and include Name of Additive, Date Applied, Quantity Applied and Units (in gals. or lbs.)

F. SHUTDOWNS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM: (check all that apply)

¿ 1. The Active Remedial System had unscheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Unscheduled Shutdowns: _____ b. Total Number of Days of Unscheduled Shutdowns: _____

c. Reason(s) for Unscheduled Shutdowns: _____

þ 2. The Active Remedial System had scheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Scheduled Shutdowns: 4 b. Total Number of Days of Scheduled Shutdowns: 0.4

c. Reason(s) for Scheduled Shutdowns: TELEMETRY INSTALL AT 4 PROPERTIES (2 HOUR SHUTDOWN PER INSTALL)

¿ 3. The Active Remedial System or Active Remedial Monitoring Program was permanently shutdown/discontinued during the Reporting Period.

a. Date of Final System or Monitoring Program Shutdown: _____
(mm/dd/yyyy)

¿ b. No Further Effluent Discharges.

¿ c. No Further Application of Remedial Additives planned; sufficient monitoring completed to demonstrate compliance with 310 CMR 40.0046.

¿ d. No Further Submittals Planned.

¿ e. Other: Describe: _____

G. SUMMARY STATEMENTS: (check all that apply for the current reporting period)

þ 1. All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

þ 2. There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

þ 3. The Active Remedial System or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

4. Indicate any Operational Problems or Notes:

¿ 5. Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT
Pursuant to 310 CMR 40.0800 (SUBPART H)
Remedial System or Monitoring Program: 5 of: 5

BWSC108 -A

Release Tracking Number
3 - 23246

A. DESCRIPTION OF ACTIVE OPERATION AND MAINTENANCE ACTIVITY:

1. Type of Active Operation and Maintenance Activity: (check all that apply)

- ☐ a. Active Remedial System: (check all that apply)
  - ☐ i. NAPL Recovery
  - ☐ ii. Soil Vapor Extraction/Bioventing
  - ☐ iii. Vapor-phase Carbon Adsorption
  - ☐ iv. Groundwater Recovery
  - ☐ v. Dual/Multi-phase Extraction
  - ☐ vi. Aqueous-phase Carbon Adsorption
  - ☐ vii. Air Stripping
  - ☐ viii. Sparging/Biosparging
  - ☐ ix. Cat/Thermal Oxidation
  - ☐ x. Other Describe: _____
- ☐ b. Active Exposure Pathway Elimination Measure
  Active Exposure Pathway Mitigation System to address (check one): ☐ i. Indoor Air ☐ ii. Drinking Water
- ☐ c. Application of Remedial Additives: (check all that apply)
  - ☐ i. To the Subsurface
  - ☐ ii. To Groundwater (Injection)
  - ☐ iii. To the Surface
- ☒ d. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section G5)
  - ☐ i. Reactive Wall
  - ☒ ii. Natural Attenuation
  - ☐ iii. Other Describe: _____

2. Mode of Operation: (check one)

☐ a. Continuous ☐ b. Intermittent ☐ c. Pulsed ☐ d. One-time Event Only ☐ e. Other: _____

3. System Effluent/Discharge: (check all that apply)

- ☐ a. Sanitary Sewer/POTW
- ☐ b. Groundwater Re-infiltration/Re-injection: (check one) ☐ i. Downgradient ☐ ii. Upgradient
- ☐ c. Vapor-phase Discharge to Ambient Air: (check one) ☐ i. Off-gas Controls ☐ ii. No Off-gas Controls
- ☐ d. Drinking Water Supply
- ☐ e. Surface Water (including Storm Drains)
- ☐ f. Other Describe: _____

B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal: From: 6/16/2015 (mm/dd/yyyy) To: 12/15/2015 (mm/dd/yyyy)

2. Number of monitoring events during the reporting period: (check one)

- ☐ a. System Startup: (if applicable)
  - ☐ i. Days 1, 3, 6, and then weekly thereafter, for the first month.
  - ☐ ii. Other Describe: _____
- ☒ b. Post-system Startup (after first month) or Monitoring Program:
  - ☐ i. Monthly
  - ☐ ii. Quarterly
  - ☒ iii. Annually
  - ☐ iv. Other Describe: _____

☒ 3. Check here to certify that the number of required monitoring events were conducted during the reporting period.

C. EFFLUENT/DISCHARGE REGULATION: (check one to indicate how the effluent/discharge limits were established)

☐ 1. NPDES: (check one) ☐ a. Remediation General Permit ☐ b. Individual Permit
☐ c. Emergency Exclusion Effective Date of Permit: _____ (mm/dd/yyyy)

☐ 2. MCP Performance Standard MCP Citations(s): _____

☐ 3. DEP Approval Letter Date of Letter: _____ (mm/dd/yyyy)

☐ 4. Other Describe: _____

D. WASTEWATER TREATMENT PLANT OPERATOR: (check one)

- 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.
  a. Name: _____ b. Grade: _____
  c. License No: _____ d. License Exp. Date: _____ (mm/dd/yyyy)
- 2. Not Required
- 3. Not Applicable

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (check all that apply)

- 1. The Active Remedial System was functional one or more days during the Reporting Period.
  a. Days System was Fully Functional: _____ b. GW Recovered (gals): _____
  c. NAPL Recovered (gals): _____ d. GW Discharged (gals): _____
  e. Avg. Soil Gas Recovery Rate (scfm): _____ f. Avg. Sparging Rate (scfm): _____
- 2. Remedial Additives: (check all that apply)
  - a. No Remedial Additives applied during the Reporting Period.
  - b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)
    - i. Nitrogen/Phosphorus:

Name of Additive	Date	Quantity	Units

    - ii. Peroxides:

Name of Additive	Date	Quantity	Units

    - iii. Microorganisms:

Name of Additive	Date	Quantity	Units

    - iv. Other:

Name of Additive	Date	Quantity	Units

  - c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)
    - i. Permanganates:

Name of Additive	Date	Quantity	Units

    - ii. Peroxides:

Name of Additive	Date	Quantity	Units

    - iii. Persulfates:

Name of Additive	Date	Quantity	Units

    - iv. Other:

Name of Additive	Date	Quantity	Units

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (cont.)

¿ d. Other additives applied: (total quantity applied at the site for the current reporting period)

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

¿ e. Check here if any additional Remedial Additives were applied. Attach list of additional additives and include Name of Additive, Date Applied, Quantity Applied and Units (in gals. or lbs.)

F. SHUTDOWNS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM: (check all that apply)

¿ 1. The Active Remedial System had unscheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Unscheduled Shutdowns: _____ b. Total Number of Days of Unscheduled Shutdowns: _____

c. Reason(s) for Unscheduled Shutdowns: _____

¿ 2. The Active Remedial System had scheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Scheduled Shutdowns: _____ b. Total Number of Days of Scheduled Shutdowns: _____

c. Reason(s) for Scheduled Shutdowns: _____

¿ 3. The Active Remedial System or Active Remedial Monitoring Program was permanently shutdown/discontinued during the Reporting Period.

a. Date of Final System or Monitoring Program Shutdown: _____
(mm/dd/yyyy)

¿ b. No Further Effluent Discharges.

¿ c. No Further Application of Remedial Additives planned; sufficient monitoring completed to demonstrate compliance with 310 CMR 40.0046.

¿ d. No Further Submittals Planned.

¿ e. Other: Describe: _____

G. SUMMARY STATEMENTS: (check all that apply for the current reporting period)

¿ 1. All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

¿ 2. There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

þ 3. The Active Remedial System or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

4. Indicate any Operational Problems or Notes:

þ 5. Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.

Additional supporting information for:

CRA REMEDIAL MONITORING REPORT

Pursuant to 310 CMR 40.0800 (Subpart H)

BWSC-108A, Remedial System 5 of 5, Section G, Question 5: **SUMMARY STATEMENTS:** Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.

The Summary Statement for BWSC-108A Remedial System 5 of 5 has been submitted via eDEP, Transmittal No. 799773 as part of the "Phase V Status Report No. 9 and Remedial Monitoring Report No. 24," RTN 3-23246, 50 Tufts Street, Somerville, Massachusetts, dated February 2, 2016

Appendix B

Property Owner Notification Letters

GEI Consultants

Consulting Engineers and Scientists

August 18, 2015
Project 04516-3

Jason Santana
10 Franklin Avenue,
Somerville, MA

Dear Mr. Santana:

Re: Indoor Air and Sump Water Sampling Results
29 Knowlton Street
Somerville, Massachusetts

On behalf of UniFirst Corporation, GEI Consultants, Inc. collected two indoor air samples and one sump water sample at your property at 29 Knowlton Street on July 19, 2015.

We collected one indoor air sample in the basement and one indoor air sample on the first floor. We have attached a summary table of the chemicals detected in the indoor air samples along with the previous sampling results, and the laboratory data sheets for the recent sampling (Table 1). The laboratory testing did not detect tetrachloroethylene (PCE) or any other chlorinated volatile organic compounds (VOCs) at concentrations above the laboratory reporting limits.

We collected one water sample from the sump that was recently installed in the basement of the property. We have attached a summary table of the chemicals detected in the water sample (Table 2) and the laboratory data sheets for the recent sampling. The laboratory testing did not detect tetrachloroethylene (PCE) or any other chlorinated volatile organic compounds (VOCs) at concentrations above the laboratory reporting limits. Low levels of other compounds were detected in the water sample that may be associated with commonly used commercial and consumer products, such as gasoline or adhesives for PVC piping. The available Massachusetts Department of Environmental Protection (MassDEP) standards for groundwater that are protective of indoor are also included on Table 2.

We recommend that the sump be sealed, as a precautionary measure. UniFirst Corporation will arrange and pay for sealing the sump. With your consent, we will plan to perform this work, and then to conduct additional indoor air sampling to monitor the effects, if any, of the recent modifications to the basement on conditions at the property.

Individuals and public officials may request additional public involvement activities under the Massachusetts Contingency Plan (MCP; 310 CMR 40.1403(9) and 40.1404). The property owner also may request additional documentation, such as that listed at 310 CMR 40.0017(3), associated with the above-referenced samples. We will provide such additional documentation within 30 days of our receipt of such a request.

We appreciate your continued cooperation throughout the sampling process. If you have any questions regarding the sampling results, please do not hesitate to contact me at 781-721-4012 or igladstone@geiconsultants.com.

GEI Consultants, Inc.
400 Unicorn Park Drive, Woburn, MA 01801
781.721.4000 fax: 781.721.4073

Sincerely,

GEI CONSULTANTS, INC.

Ileen S. Gladstone, P.E., LSP, LEED AP
Senior Vice President

CMM/JDR/ISG:mrb
Enclosures

c: Timothy Cosgrave, UniFirst Corporation
Vithal V. Deshpande, City of Somerville
MassDEP

Table 2
Chemical Testing Results - Sump Water Sample
29 Knowlton Street
Somerville, MA

			Location Name: Sample Name: Sample Date:	29 KNOWLTON-SUMP 29 KNOW-SUMP 7/19/2015
Analyte	**Method**	**Units**	**Method 1 Standard GW-2**	
Volatile Organic Compounds (VOCs)	8260C	ug/L		
Acetone			50,000	71.0
Benzene			1,000	0.48 J
2-Butanone			50,000	38.6
p-Isopropyltoluene			NS	38.7
Tetrahydrofuran			NS	44.5
Toluene			50,000	0.30 J

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
2. MCP = 310 CMR 40.0000 Massachusetts Contingency Plan with revisions effective June 20,
3. Method 1 Standards (e.g., GW-2),where identified, are cited from the MCP.
4. NS = No MCP standard has been established for this analyte.
5. µg/L = micrograms per liter
6. J = The reported result is below the laboratory reporting limit and is estimated.

Accutest LabLink@159793 13:38 03-Aug-2015

Report of Analysis

Client Sample ID:	045163-29 KNOW-SUMP		
Lab Sample ID:	MC40133-1	**Date Sampled:**	07/19/15
Matrix:	AQ - Ground Water	**Date Received:**	07/20/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	GEI Tufts Street Somerville MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V41325.D	1	07/23/15	JB	n/a	n/a	MSV1493
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA MCP List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	71.0	10	2.0	ug/l	
71-43-2	Benzene	0.48	0.50	0.27	ug/l	J
108-86-1	Bromobenzene	ND	5.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.18	ug/l	
75-25-2	Bromoform	ND	1.0	0.39	ug/l	
74-83-9	Bromomethane	ND	2.0	0.79	ug/l	
78-93-3	2-Butanone (MEK)	38.6	5.0	3.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.50	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.50	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.57	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.19	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.49	ug/l	
67-66-3	Chloroform	ND	1.0	0.40	ug/l	
74-87-3	Chloromethane	ND	2.0	0.49	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.60	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.46	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.79	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	0.83	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.22	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.24	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.24	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.37	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.53	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.28	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.48	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	045163-29 KNOW-SUMP		
Lab Sample ID:	MC40133-1	**Date Sampled:**	07/19/15
Matrix:	AQ - Ground Water	**Date Received:**	07/20/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	GEI Tufts Street Somerville MA		

VOA MCP List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.29	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.7	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.23	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.27	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	ND	25	20	ug/l	
60-29-7	Ethyl Ether	ND	5.0	0.52	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	0.45	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.7	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.27	ug/l	
99-87-6	p-Isopropyltoluene	38.7	5.0	0.32	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.77	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.27	ug/l	
91-20-3	Naphthalene	ND	5.0	0.61	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.29	ug/l	
100-42-5	Styrene	ND	5.0	0.28	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.29	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.73	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.25	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.29	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.21	ug/l	
109-99-9	Tetrahydrofuran	44.5	10	3.0	ug/l	
108-88-3	Toluene	0.30	1.0	0.29	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.78	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.74	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.42	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.47	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.39	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.45	ug/l	
	m,p-Xylene	ND	1.0	0.47	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	045163-29 KNOW-SUMP		
Lab Sample ID:	MC40133-1	**Date Sampled:**	07/19/15
Matrix:	AQ - Ground Water	**Date Received:**	07/20/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	GEI Tufts Street Somerville MA		

VOA MCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		72-133%
2037-26-5	Toluene-D8	104%		85-114%
460-00-4	4-Bromofluorobenzene	96%		70-134%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Table 1. Chemical Testing Results - Indoor Air
29 Knowlton Street
Somerville, Massachusetts

Sample Location:		29 Knowlton Street																					
Sample Name:		29KNOW-1		29KNOW-B		29KNOW-1		29KNOW-B		29KNOW-1		29KNOW-B		29KNOW-1		29KNOW-B		29KNOW-1		29KNOW-B		29KNOW-1		29KNOW-B	
Sample Date:		6/22/07		6/22/07		2/2/08		2/2/08		7/8/09		7/8/09		3/8/10		3/8/10		10/22/14		10/22/14		7/19/15		7/19/15	
Units:		µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv
Analyte	**Method**																								
Volatile Organic Compounds (VOCs)	TO-15																								
Chloroethane		< 0.53	< 0.20	< 0.53	< 0.20	< 0.53	< 0 .20	< 0.53	< 0.20	< 0.53	< 0.20	< 0.53	< 0.20	< 0.53	< 0.20	< 0.53	< 0.20	NT	NT	NT	NT	NT	NT	NT	NT
Carbon tetrachloride		< 1.3	< 0.20	0.63 J	0.10 J	0.63 J	0.10 J	< 1.3	< 0.20	1.1 J	0.18 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	NT	NT	NT	NT	NT	NT	NT	NT
1,1-Dichloroethane		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
1,1-Dichloroethylene		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
1,2-Dichloroethane		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	NT	NT	NT	NT	NT	NT	NT	NT
trans-1,2-Dichloroethylene		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
cis-1,2-Dichloroethylene		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
1,1,1-Trichloroethane		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
1,1,2,2-Tetrachloroethane		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
1,1,2-Trichloroethane		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Tetrachloroethylene		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethylene		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Vinyl chloride		< 0.51	< 0.20	< 0.51	< 0.20	< 0.51	< 0.20	< 0.51	< 0.20	< 0.51	< 0.20	< 0.51	< 0.20	< 0.51	< 0.20	< 0.51	< 0.20	< 0.51	< 0.20	< 0.51	< 0.20	< 0.51	< 0.20	< 0.51	< 0.20

General Notes:

1. µg/m^3 = micrograms per cubic meter.
2. ppbv = parts per billion by volume.
3. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
4. NT = Not tested.
5. Carbon tetrachloride, chloroethane and 1,2-dichloroethane are not contaminants of concern associated with the 50 Tufts Street disposal site and were not been detected above laboratory reporting limits at 29 Knowlton Street. Therefore, this compound was not analyzed in the October 2014 and July 2015 indoor air samples.

Qualifying Note:

J The reported result is below the laboratory reporting limit and is estimated.

Accutest Laboratories

Report of Analysis

Client Sample ID:	045163-29KNOW-1		
Lab Sample ID:	MC40134-1	**Date Sampled:**	07/19/15
Matrix:	AIR - Indoor Air Comp. Summa ID: M115	**Date Received:**	07/20/15
Method:	TO-15	**Percent Solids:**	n/a
Project:	GEI Tufts Street Somerville MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q30820.D	1	07/27/15	DRY	n/a	n/a	MSQ1339
Run #2							

	Initial Volume
Run #1	400 ml
Run #2	

VOA Special List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	0.078	ppbv		ND	0.81	0.32	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	0.14	ppbv		ND	0.79	0.56	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	0.13	ppbv		ND	0.79	0.52	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	0.093	ppbv		ND	0.79	0.37	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	0.095	ppbv		ND	1.1	0.52	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	0.18	ppbv		ND	1.4	1.2	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	0.16	ppbv		ND	1.1	0.87	ug/m3
127-18-4	165.8	Tetrachloroethylene	ND	0.20	0.16	ppbv		ND	1.4	1.1	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.20	0.15	ppbv		ND	1.1	0.81	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	0.13	ppbv		ND	0.51	0.33	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	102%		50-129%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	045163-29KNOW-B		
Lab Sample ID:	MC40134-2	**Date Sampled:**	07/19/15
Matrix:	AIR - Indoor Air Comp. Summa ID: M413	**Date Received:**	07/20/15
Method:	TO-15	**Percent Solids:**	n/a
Project:	GEI Tufts Street Somerville MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q30821.D	1	07/27/15	DRY	n/a	n/a	MSQ1339
Run #2							

	Initial Volume
Run #1	400 ml
Run #2	

VOA Special List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	0.078	ppbv		ND	0.81	0.32	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	0.14	ppbv		ND	0.79	0.56	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	0.13	ppbv		ND	0.79	0.52	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	0.093	ppbv		ND	0.79	0.37	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	0.095	ppbv		ND	1.1	0.52	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	0.18	ppbv		ND	1.4	1.2	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	0.16	ppbv		ND	1.1	0.87	ug/m3
127-18-4	165.8	Tetrachloroethylene	ND	0.20	0.16	ppbv		ND	1.4	1.1	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.20	0.15	ppbv		ND	1.1	0.81	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	0.13	ppbv		ND	0.51	0.33	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	110%		50-129%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Consulting
Engineers and
Scientists

November 17, 2015
Project 04516-3

Mr. Vital V. Deshpande
Environmental Coordinator
City Hall Annex
50 Evergreen Avenue
Somerville, MA 02145-2819

Dear Mr. Deshpande:

Re: Groundwater Sampling
Certain "Public Ways"
Somerville, Massachusetts

Thank you for permitting GEI to conduct groundwater sampling on certain public ways in Somerville, Massachusetts. In advance of the groundwater sampling, we are providing you with a "Notice of Environmental Sampling Form (BWSC-123)," as required by the Massachusetts Department of Environmental Protection (MassDEP).

Thank you for your continued assistance. Please contact me at 781-721-4012 or igladstone@geiconsultants.com if you have any questions.

Sincerely,

GEI CONSULTANTS, INC.

Ileen S. Gladstone, P.E., LSP, LEED AP
Senior Vice President

CMM/JDR/ISG:mrb
Enclosure

c: Timothy Cosgrave, UniFirst Corporation
MassDEP-NERO (as part of Status Report)

GEI Consultants, Inc.
400 Unicorn Park Drive, Woburn, MA 01801
781.721.4000 fax: 781.721.4073

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

3 | 23246

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Tufts Street

City/Town: Somerville, MA Zip Code: 02145-4129

B. This notice is being provided to the following party:

1. Name: Mr. Vithal V. Deshpande, City of Somerville

2. Street Address: City Hall Annex, 50 Evergreen Avenue

City/Town: Somerville, MA Zip Code: 02145-2819

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling will be/~~has been~~ conducted at property owned by the recipient of this notice.

☐ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☐ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/~~has been~~ conducted:

1. Street Address: Somerville City Streets

City/Town: Somerville, MA Zip Code: 02145

2. MCP phase of work during which the sampling will be/~~has been~~ conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☑ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☐ Other _____ (specify)

3. Description of property where sampling will be/~~has been~~ conducted:

☐ residential ☐ commerical ☐ industrial ☐ school/playground ☑ Other City Streets (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

Groundwater Sampling

E. Contact information related to the party providing this notice:

Contact Name: Ileen Gladstone, P.E., LSP, LEED AP

Street Address: GEI Consultants, Inc., 400 Unicorn Park Drive

City/Town: Woburn, MA Zip Code: 01801-3341

Telephone: (781) 721-4012 Email: igladstone@geiconsultants.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

Appendix C

Laboratory Testing Reports

New England ACCUTEST LABORATORIES

12/23/15

Technical Report for

GEI Consultants, Inc.

GEI Tufts Street Somerville MA

04516-3

Accutest Job Number: MC40133

Sampling Date: 07/19/15

Report to:

GEI Consultants, Inc.

CMalagrida@geiconsultants.com

ATTN: Catherine Malagrida

Total number of pages in report: **37**

NELAP ACCREDITED TNI LABORATORY

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Reza Tand
Lab Director

Client Service contact: Frank DAgostino 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) WI (399080220) DoD ELAP (L-A-B L2235)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.
Test results relate only to samples analyzed.

Accutest Laboratories is the sole authority for authorizing edits or modifications to this document. Unauthorized modification of this report is strictly prohibited.

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Sample Summary

GEI Consultants, Inc.

Job No: MC40133

GEI Tufts Street Somerville MA
Project No: 04516-3

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC40133-1	07/19/15	05:35	MLK	07/20/15	AQ	Ground Water	045163-29 KNOW-SUMP

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	GEI Consultants, Inc.	**Job No**	MC40133
Site:	GEI Tufts Street Somerville MA	**Report Date**	7/24/2015 3:57:42 PM

1 Sample was collected on 07/19/2015 and were received at Accutest on 07/20/2015 properly preserved, at 2.2 Deg. C and intact. These Samples received an Accutest job number of MC40133. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260C

Matrix: AQ **Batch ID:** MSV1493

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Continuing calibration check standard MSV1493-CC1479 for ethyl ether, 1,1-dichloroethene, acetone, carbon disulfide, carbon tetrachloride, tert-amyl methyl ether, cis-1,3-dichloropropene, 2-hexanone, n-butylbenzene exceed 20% Difference. This check standard met MCP criteria.
- The response factor (RF) for Acetone, 2-Butanone at low point (0.031, 0.023) and at average point (0.035, 0.030) in the initial calibration MSV1479-ICC1479less than the required RF of 0.1 as noted in Table 4 of SW846 8260C.
- Quadratic regression is employed for initial calibration standard MSV1479-ICC1479 for trans-1,3-dichloropropene, naphthalene.
- Initial calibration verification standard MSV1479-ICV1479 for Acetone, carbon disulfide, 2-butanone, 2-hexanone exceeds 30% Difference.
- MSV1493-BS/BSD for Carbon disulfide, Ethyl Ether: Outside MCP control limits, but within in-house control limits. Associated sample is non-detect for these compounds.

Accutest may not have met all requested limits due to methodology limitations, sample matrix, dilutions, or percents solids.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety.The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(MC40133).

Summary of Hits

Job Number: MC40133
Account: GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA
Collected: 07/19/15

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC40133-1	**045163-29 KNOW-SUMP**					
Acetone		71.0	10	2.0	ug/l	SW846 8260C
Benzene		0.48 J	0.50	0.27	ug/l	SW846 8260C
2-Butanone (MEK)		38.6	5.0	3.0	ug/l	SW846 8260C
p-Isopropyltoluene		38.7	5.0	0.32	ug/l	SW846 8260C
Tetrahydrofuran		44.5	10	3.0	ug/l	SW846 8260C
Toluene		0.30 J	1.0	0.29	ug/l	SW846 8260C

New England ACCUTEST LABORATORIES

4

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	045163-29 KNOW-SUMP		
Lab Sample ID:	MC40133-1	**Date Sampled:**	07/19/15
Matrix:	AQ - Ground Water	**Date Received:**	07/20/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	GEI Tufts Street Somerville MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V41325.D	1	07/23/15	JB	n/a	n/a	MSV1493
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA MCP List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	71.0	10	2.0	ug/l	
71-43-2	Benzene	0.48	0.50	0.27	ug/l	J
108-86-1	Bromobenzene	ND	5.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.18	ug/l	
75-25-2	Bromoform	ND	1.0	0.39	ug/l	
74-83-9	Bromomethane	ND	2.0	0.79	ug/l	
78-93-3	2-Butanone (MEK)	38.6	5.0	3.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.50	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.50	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.57	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.19	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.49	ug/l	
67-66-3	Chloroform	ND	1.0	0.40	ug/l	
74-87-3	Chloromethane	ND	2.0	0.49	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.60	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.46	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.79	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	0.83	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.22	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.24	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.24	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.37	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.53	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.28	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.48	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	045163-29 KNOW-SUMP		
Lab Sample ID:	MC40133-1	**Date Sampled:**	07/19/15
Matrix:	AQ - Ground Water	**Date Received:**	07/20/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	GEI Tufts Street Somerville MA		

VOA MCP List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.29	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.7	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.23	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.27	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	ND	25	20	ug/l	
60-29-7	Ethyl Ether	ND	5.0	0.52	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	0.45	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.7	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.27	ug/l	
99-87-6	p-Isopropyltoluene	38.7	5.0	0.32	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.77	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.27	ug/l	
91-20-3	Naphthalene	ND	5.0	0.61	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.29	ug/l	
100-42-5	Styrene	ND	5.0	0.28	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.29	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.73	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.25	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.29	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.21	ug/l	
109-99-9	Tetrahydrofuran	44.5	10	3.0	ug/l	
108-88-3	Toluene	0.30	1.0	0.29	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.78	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.74	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.42	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.47	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.39	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.45	ug/l	
	m,p-Xylene	ND	1.0	0.47	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	045163-29 KNOW-SUMP		
Lab Sample ID:	MC40133-1	**Date Sampled:**	07/19/15
Matrix:	AQ - Ground Water	**Date Received:**	07/20/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	GEI Tufts Street Somerville MA		

VOA MCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		72-133%
2037-26-5	Toluene-D8	104%		85-114%
460-00-4	4-Bromofluorobenzene	96%		70-134%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

New England ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- MCP Form
- Sample Tracking Chronicle
- Internal Chain of Custody

Chain-of-Custody Record

Laboratory: ACCUTEST

Laboratory Job # (Lab use only) MC 40133

GEI Consultants
400 Unicorn Park Drive
Woburn, MA 01801
PH: 781.721.4000
FX: 781.721.4073

Project Information

Project Name: Tufts Street

Project Location: Somerville, MA

Project Number: 045163-3

Project Manager: J. Roman
(c) 781-721-4136 (c) 619-972-2951

Send Report to: Jessica Englehart

Send EDD to: labdata@geiconsultants.com

Page 1 of 1

Preservative: HCl

Analysis: VOCs

Sample Handling

Samples Field Filtered: YES (NO) NA

Sampled Shipped With Ice: (YES) NO

MCP PRESUMPTIVE CERTAINTY REQUIRED – (YES) NO

If Yes, Are MCP Analytical Methods Required? (YES) NO NA

Are Drinking Water Samples Submitted? YES (NO) NA

If Yes, Have Drinking Water Sampling Requirements Been Met? YES NO (NA)

Lab Sample Number	GEI Sample ID	Collection Date	Collection Time	Matrix	No. of Bottles	Sampler(s) Initials	VOCs	Sample Specific Remarks
-1	045163-29KNOW-SUMP	7/9/15	0535	Water	3	MLR	X	
								212

MCP Level Needed: GEI requires that, within the specified method, the most stringent Method 1 MCP standard be met for all analytes whenever possible.

Turnaround Time (Business days):

Normal X Other ____

10-Day ____ 7-Day ____

5-Day X 3-Day ____

Before submitting rush turnaround samples, you **must** notify the laboratory to confirm that the TAT can be achieved.

Additional Requirements/Comments/Remarks:

	Relinquished by sampler: (signature)	Date	Time	Received by: (signature)
1.	Margaret Kelli	7/9/15	0620	GEI Sample Fridge
2.		7/20	19:14	
3.		7/21/15	1600	
4.				

2.2°

MC40133: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC40133 **Client:** GEI **Project:**

Date / Time Received: 7/20/2015 4:00:00 PM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (2.2/2.2);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Thermometer ID:	G1;		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Accutest Laboratories
V:(508) 481-6200

495 Technology Center West, Bldg One
F: (508) 481-7753

Marlborough, MA 01752
www/accutest.com

MC40133: Chain of Custody
Page 2 of 2

Exhibit VII A-2: MassDEP Analytical Protocol Certification Form

MassDEP Analytical Protocol Certification Form

Laboratory Name:	Accutest Laboratories of New England	Project #:	MC40133
Project Location:	GEI Tufts Street Somerville MA	MADEP RTN	None

This form provides certifications for the following data set: list Laboratory Sample ID Numbers(s)
MC40133-1

Matrices: Groundwater/Surface Water (X) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other ( )

CAM Protocol (check all that apply below):

8260 VOC (X) CAM IIA	7470/7471 Hg ( ) CAM III B	MassDEP VPH ( ) CAM IV A	8081 Pesticides ( ) CAM V B	7196 Hex Cr ( ) CAM VI B	Mass DEP APH ( ) CAM IX A
8270 SVOC ( ) CAM II B	7010 Metals ( ) CAM III C	MassDEP EPH ( ) CAM IV B	8151 Herbicides ( ) CAM V C	8330 Explosives ( ) CAM VIII A	TO-15 VOC ( ) CAM IX B
6010 Metals ( ) CAM III A	6020 Metals ( ) CAM III D	8082 PCB ( ) CAM V A	9014 Total Cyanide/PAC ( ) CAM VI A	6860 Perchlorate ( ) CAM VIII B	

Affirmative Responses to Questions A Through F are required for "Presumptive Certainty status

A	Were all samples received in a condition consistent with those described on the Chain-of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☑ Yes	☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes	☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes	☐ No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes	☐ No
E	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	☑ Yes	☐ No
	b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☑ Yes	☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes	☐ No

Responses to questions G, H, and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols	☐ Yes	☑ No [1]
	Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data useability and representativeness requirements described in 310 CMR 40.1056(2)(k) and WSC-07-350.		
H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	☐ Yes	☑ No [1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☑ Yes	☐ No [1]

[1] ***All Negative responses must be addressed in an attached Environmental Laboratory case narrative.***

I the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: [signature] **Position:** **Laboratory Director**

Printed Name: **Reza Tand** **Date:** **07/24/2015**

Internal Sample Tracking Chronicle

GEI Consultants, Inc.

Job No: MC40133

GEI Tufts Street Somerville MA
Project No: 04516-3

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC40133-1 Collected: 19-JUL-15 05:35 By: MLK			Received: 20-JUL-15 By: BA			
045163-29 KNOW-SUMP						
MC40133-1	SW846 8260C	23-JUL-15 11:49	JB			V8260MCP

Accutest Internal Chain of Custody

Job Number: MC40133
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA
Received: 07/20/15

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC40133-1.1	VOC Ref #2	Jaclyn Bergeron	07/23/15 10:03	Retrieve from Storage
MC40133-1.1	Jaclyn Bergeron	GCMSV	07/23/15 10:03	Load on Instrument
MC40133-1.1	GCMSV	Jaclyn Bergeron	07/24/15 09:49	Unload from Instrument
MC40133-1.1	Jaclyn Bergeron	VOC Ref #2	07/24/15 09:49	Return to Storage
MC40133-1.1	Scott Parsick		10/08/15 10:25	Disposed
MC40133-1.3	VOC Ref #2	Jaclyn Bergeron	07/22/15 09:30	Retrieve from Storage
MC40133-1.3	Jaclyn Bergeron	GCMSV	07/22/15 09:30	Load on Instrument
MC40133-1.3	GCMSV	Jaclyn Bergeron	07/23/15 09:54	Unload from Instrument
MC40133-1.3	Jaclyn Bergeron	VOC Ref #2	07/23/15 09:55	Return to Storage
MC40133-1.3	Scott Parsick		10/08/15 10:25	Disposed

New England ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: MC40133
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1493-MB	V41323.D	1	07/23/15	JB	n/a	n/a	MSV1493

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC40133-1

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.18	ug/l	
75-25-2	Bromoform	ND	1.0	0.39	ug/l	
74-83-9	Bromomethane	ND	2.0	0.79	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	3.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.50	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.50	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.57	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.19	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.49	ug/l	
67-66-3	Chloroform	ND	1.0	0.40	ug/l	
74-87-3	Chloromethane	ND	2.0	0.49	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.60	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.46	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.79	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	0.83	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.22	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.24	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.24	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.37	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.53	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.28	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.48	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.29	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.7	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.23	ug/l	

Method Blank Summary

Job Number: MC40133
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1493-MB	V41323.D	1	07/23/15	JB	n/a	n/a	MSV1493

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC40133-1

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.27	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	ND	25	20	ug/l	
60-29-7	Ethyl Ether	ND	5.0	0.52	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	0.45	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.7	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.27	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.32	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.77	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.27	ug/l	
91-20-3	Naphthalene	ND	5.0	0.61	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.29	ug/l	
100-42-5	Styrene	ND	5.0	0.28	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.29	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.73	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.25	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.29	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.21	ug/l	
109-99-9	Tetrahydrofuran	ND	10	3.0	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.78	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.74	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.42	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.47	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.39	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.45	ug/l	
	m,p-Xylene	ND	1.0	0.47	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

Method Blank Summary

Job Number: MC40133
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1493-MB	V41323.D	1	07/23/15	JB	n/a	n/a	MSV1493

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC40133-1

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	106%	72-133%
2037-26-5	Toluene-D8	101%	85-114%
460-00-4	4-Bromofluorobenzene	99%	70-134%

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC40133
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1493-BS	V41320.D	1	07/23/15	JB	n/a	n/a	MSV1493
MSV1493-BSD	V41321.D	1	07/23/15	JB	n/a	n/a	MSV1493

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC40133-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	64.2	128	57.4	115	11	14-172/25
71-43-2	Benzene	50	51.7	103	51.8	104	0	68-127/25
108-86-1	Bromobenzene	50	50.4	101	51.1	102	1	74-124/25
74-97-5	Bromochloromethane	50	51.0	102	50.1	100	2	68-135/25
75-27-4	Bromodichloromethane	50	47.9	96	47.2	94	1	72-144/25
75-25-2	Bromoform	50	46.7	93	44.7	89	4	59-147/25
74-83-9	Bromomethane	50	59.0	118	58.3	117	1	34-175/25
78-93-3	2-Butanone (MEK)	50	60.7	121	57.5	115	5	43-147/25
104-51-8	n-Butylbenzene	50	60.1	120	60.1	120	0	77-136/25
135-98-8	sec-Butylbenzene	50	56.6	113	57.1	114	1	75-134/25
98-06-6	tert-Butylbenzene	50	58.5	117	59.1	118	1	74-132/25
75-15-0	Carbon disulfide	50	67.5	135	67.2	134	0	34-171/25
56-23-5	Carbon tetrachloride	50	60.4	121	59.2	118	2	55-153/25
108-90-7	Chlorobenzene	50	47.6	95	48.3	97	1	71-123/25
75-00-3	Chloroethane	50	59.0	118	59.7	119	1	58-175/25
67-66-3	Chloroform	50	49.8	100	49.6	99	0	67-136/25
74-87-3	Chloromethane	50	58.4	117	56.2	112	4	25-182/25
95-49-8	o-Chlorotoluene	50	54.8	110	55.4	111	1	72-130/25
106-43-4	p-Chlorotoluene	50	54.8	110	55.1	110	1	73-127/25
108-20-3	Di-Isopropyl ether	50	56.8	114	55.7	111	2	56-145/25
96-12-8	1,2-Dibromo-3-chloropropane	50	49.0	98	43.7	87	11	50-159/25
124-48-1	Dibromochloromethane	50	46.9	94	45.8	92	2	73-139/25
106-93-4	1,2-Dibromoethane	50	49.2	98	48.7	97	1	69-132/25
95-50-1	1,2-Dichlorobenzene	50	50.5	101	49.6	99	2	77-125/25
541-73-1	1,3-Dichlorobenzene	50	50.6	101	50.9	102	1	77-124/25
106-46-7	1,4-Dichlorobenzene	50	48.1	96	48.5	97	1	73-128/25
75-71-8	Dichlorodifluoromethane	50	51.6	103	47.7	95	8	23-157/25
75-34-3	1,1-Dichloroethane	50	52.6	105	52.4	105	0	63-145/25
107-06-2	1,2-Dichloroethane	50	52.1	104	50.5	101	3	58-145/25
75-35-4	1,1-Dichloroethene	50	63.8	128	64.3	129	1	56-158/25
156-59-2	cis-1,2-Dichloroethene	50	54.9	110	54.9	110	0	67-133/25
156-60-5	trans-1,2-Dichloroethene	50	52.9	106	52.5	105	1	66-136/25
78-87-5	1,2-Dichloropropane	50	48.7	97	48.2	96	1	75-133/25
142-28-9	1,3-Dichloropropane	50	50.5	101	50.1	100	1	70-127/25
594-20-7	2,2-Dichloropropane	50	58.3	117	56.8	114	3	52-163/25
563-58-6	1,1-Dichloropropene	50	50.9	102	50.7	101	0	77-140/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC40133
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1493-BS	V41320.D	1	07/23/15	JB	n/a	n/a	MSV1493
MSV1493-BSD	V41321.D	1	07/23/15	JB	n/a	n/a	MSV1493

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC40133-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	50	61.3	123	60.4	121	1	74-141/25
10061-02-6	trans-1,3-Dichloropropene	50	54.1	108	52.0	104	4	77-143/25
123-91-1	1,4-Dioxane	250	211	84	203	81	4	30-182/25
60-29-7	Ethyl Ether	50	69.0	138	66.2	132	4	53-157/25
100-41-4	Ethylbenzene	50	50.9	102	51.8	104	2	71-129/25
87-68-3	Hexachlorobutadiene	50	51.6	103	47.5	95	8	64-146/25
591-78-6	2-Hexanone	50	62.3	125	56.8	114	9	22-163/25
98-82-8	Isopropylbenzene	50	57.3	115	58.6	117	2	72-133/25
99-87-6	p-Isopropyltoluene	50	59.2	118	59.4	119	0	77-134/25
1634-04-4	Methyl Tert Butyl Ether	50	57.1	114	56.5	113	1	46-151/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	57.2	114	53.4	107	7	47-145/25
74-95-3	Methylene bromide	50	49.5	99	48.0	96	3	70-132/25
75-09-2	Methylene chloride	50	52.3	105	52.7	105	1	55-146/25
91-20-3	Naphthalene	50	45.9	92	37.5	75	20	39-176/25
103-65-1	n-Propylbenzene	50	55.7	111	56.3	113	1	74-134/25
100-42-5	Styrene	50	56.6	113	57.0	114	1	71-134/25
994-05-8	tert-Amyl Methyl Ether	50	61.7	123	59.7	119	3	34-159/25
637-92-3	tert-Butyl Ethyl Ether	50	56.3	113	55.8	112	1	29-172/25
630-20-6	1,1,1,2-Tetrachloroethane	50	48.0	96	48.5	97	1	70-137/25
79-34-5	1,1,2,2-Tetrachloroethane	50	49.3	99	48.3	97	2	58-145/25
127-18-4	Tetrachloroethene	50	46.5	93	47.5	95	2	63-137/25
109-99-9	Tetrahydrofuran	50	49.4	99	48.7	97	1	63-137/25
108-88-3	Toluene	50	49.8	100	49.6	99	0	75-126/25
87-61-6	1,2,3-Trichlorobenzene	50	62.5	125	49.0	98	24	27-181/25
120-82-1	1,2,4-Trichlorobenzene	50	51.3	103	44.8	90	14	40-176/25
71-55-6	1,1,1-Trichloroethane	50	54.4	109	53.2	106	2	68-144/25
79-00-5	1,1,2-Trichloroethane	50	50.1	100	48.6	97	3	72-133/25
79-01-6	Trichloroethene	50	48.7	97	49.0	98	1	73-126/25
75-69-4	Trichlorofluoromethane	50	53.7	107	51.8	104	4	43-152/25
96-18-4	1,2,3-Trichloropropane	50	54.5	109	54.5	109	0	58-141/25
95-63-6	1,2,4-Trimethylbenzene	50	58.1	116	58.7	117	1	76-129/25
108-67-8	1,3,5-Trimethylbenzene	50	58.9	118	59.7	119	1	71-127/25
75-01-4	Vinyl chloride	50	56.7	113	56.1	112	1	36-167/25
	m,p-Xylene	100	106	106	107	107	1	68-130/25
95-47-6	o-Xylene	50	53.5	107	54.2	108	1	69-126/25
1330-20-7	Xylene (total)	150	159	106	161	107	1	67-129/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC40133
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1493-BS	V41320.D	1	07/23/15	JB	n/a	n/a	MSV1493
MSV1493-BSD	V41321.D	1	07/23/15	JB	n/a	n/a	MSV1493

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC40133-1

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	100%	99%	72-133%
2037-26-5	Toluene-D8	104%	104%	85-114%
460-00-4	4-Bromofluorobenzene	103%	103%	70-134%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: MC40133
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample:	MSV1479-BFB	**Injection Date:**	07/14/15
Lab File ID:	V41001.D	**Injection Time:**	12:14
Instrument ID:	GCMSV		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	114688	22.4		Pass
75	30.0 - 60.0% of mass 95	238464	46.5		Pass
95	Base peak, 100% relative abundance	512640	100.0		Pass
96	5.0 - 9.0% of mass 95	34752	6.78		Pass
173	Less than 2.0% of mass 174	3827	0.75	(0.90) [a]	Pass
174	50.0 - 100.0% of mass 95	425792	83.1		Pass
175	5.0 - 9.0% of mass 174	32544	6.35	(7.64) [a]	Pass
176	95.0 - 101.0% of mass 174	408960	79.8	(96.0) [a]	Pass
177	5.0 - 9.0% of mass 176	26960	5.26	(6.59) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSV1479-IC1479	V41002.D	07/14/15	12:42	00:28	Initial cal 0.5
MSV1479-IC1479	V41003.D	07/14/15	13:11	00:57	Initial cal 1
MSV1479-IC1479	V41004.D	07/14/15	13:39	01:25	Initial cal 2
MSV1479-IC1479	V41005.D	07/14/15	14:07	01:53	Initial cal 5
MSV1479-IC1479	V41006.D	07/14/15	14:36	02:22	Initial cal 10
MSV1479-IC1479	V41007.D	07/14/15	15:04	02:50	Initial cal 25
MSV1479-ICC1479	V41008.D	07/14/15	15:33	03:19	Initial cal 50
MSV1479-IC1479	V41009.D	07/14/15	16:01	03:47	Initial cal 100
MSV1479-IC1479	V41010.D	07/14/15	16:29	04:15	Initial cal 200
MSV1479-IC1479	V41011.D	07/14/15	16:58	04:44	Initial cal 400
MSV1479-ICV1479	V41016.D	07/14/15	19:20	07:06	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: MC40133
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSV1493-BFB
Lab File ID: V41319.D
Instrument ID: GCMSV
Injection Date: 07/23/15
Injection Time: 08:58

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	124768	23.1		Pass
75	30.0 - 60.0% of mass 95	254400	47.1		Pass
95	Base peak, 100% relative abundance	539840	100.0		Pass
96	5.0 - 9.0% of mass 95	37272	6.90		Pass
173	Less than 2.0% of mass 174	3908	0.72	(0.88) [a]	Pass
174	50.0 - 100.0% of mass 95	441792	81.8		Pass
175	5.0 - 9.0% of mass 174	33040	6.12	(7.48) [a]	Pass
176	95.0 - 101.0% of mass 174	420992	78.0	(95.3) [a]	Pass
177	5.0 - 9.0% of mass 176	29048	5.38	(6.90) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSV1493-CC1479	V41320.D	07/23/15	09:26	00:28	Continuing cal 50
MSV1493-BS	V41320.D	07/23/15	09:26	00:28	Blank Spike
MSV1493-BSD	V41321.D	07/23/15	09:55	00:57	Blank Spike Duplicate
MSV1493-MB	V41323.D	07/23/15	10:52	01:54	Method Blank
ZZZZZZ	V41324.D	07/23/15	11:20	02:22	(unrelated sample)
MC40133-1	V41325.D	07/23/15	11:49	02:51	045163-29 KNOW-SUMP
ZZZZZZ	V41326.D	07/23/15	12:17	03:19	(unrelated sample)
ZZZZZZ	V41327.D	07/23/15	12:46	03:48	(unrelated sample)
ZZZZZZ	V41328.D	07/23/15	13:14	04:16	(unrelated sample)
ZZZZZZ	V41329.D	07/23/15	13:43	04:45	(unrelated sample)
ZZZZZZ	V41330.D	07/23/15	14:11	05:13	(unrelated sample)
ZZZZZZ	V41334.D	07/23/15	16:05	07:07	(unrelated sample)
ZZZZZZ	V41335.D	07/23/15	16:33	07:35	(unrelated sample)
ZZZZZZ	V41336.D	07/23/15	17:02	08:04	(unrelated sample)
ZZZZZZ	V41337.D	07/23/15	17:30	08:32	(unrelated sample)
ZZZZZZ	V41338.D	07/23/15	17:59	09:01	(unrelated sample)
ZZZZZZ	V41339.D	07/23/15	18:28	09:30	(unrelated sample)
ZZZZZZ	V41340.D	07/23/15	18:56	09:58	(unrelated sample)
ZZZZZZ	V41341.D	07/23/15	19:24	10:26	(unrelated sample)

Volatile Internal Standard Area Summary

Job Number: MC40133
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Check Std: MSV1493-CC1479 **Injection Date:** 07/23/15
Lab File ID: V41320.D **Injection Time:** 09:26
Instrument ID: GCMSV **Method:** SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	1129029	6.57	1782794	7.75	842983	11.08	839015	13.29	165010	3.55
Upper Limit [a]	2258058	7.07	3565588	8.25	1685966	11.58	1678030	13.79	330020	4.05
Lower Limit [b]	564515	6.07	891397	7.25	421492	10.58	419508	12.79	82505	3.05

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSV1493-BS	1129029	6.57	1782794	7.75	842983	11.08	839015	13.29	165010	3.55
MSV1493-BSD	1103679	6.57	1737044	7.75	805714	11.08	793680	13.29	146179	3.54
MSV1493-MB	1010828	6.57	1604847	7.75	722155	11.08	715370	13.29	147459	3.54
ZZZZZZ	942345	6.57	1478791	7.75	686760	11.08	695017	13.29	120763	3.54
MC40133-1	875386	6.56	1387590	7.75	656853	11.08	704605	13.29	133186	3.55
ZZZZZZ	921213	6.57	1473384	7.75	684733	11.08	688706	13.29	117110	3.54
ZZZZZZ	856450	6.57	1409070	7.75	660132	11.08	660369	13.29	105072	3.54
ZZZZZZ	872246	6.57	1404446	7.75	665475	11.08	659140	13.30	106959	3.54
ZZZZZZ	841578	6.57	1354535	7.75	645844	11.08	632448	13.30	107293	3.54
ZZZZZZ	795466	6.57	1300289	7.75	615812	11.08	596879	13.30	107525	3.54
ZZZZZZ	878215	6.57	1416490	7.75	672236	11.09	693528	13.30	93516	3.56
ZZZZZZ	871006	6.57	1384983	7.75	663199	11.08	665162	13.30	93827	3.54
ZZZZZZ	842001	6.57	1358564	7.75	648178	11.08	638933	13.30	89432	3.54
ZZZZZZ	835429	6.57	1369158	7.75	647797	11.08	638766	13.30	89637	3.54
ZZZZZZ	823904	6.57	1306356	7.75	622809	11.08	602401	13.29	80916[c]	3.53
ZZZZZZ	826502	6.57	1313290	7.75	619173	11.08	599173	13.30	79354[c]	3.54
ZZZZZZ	858509	6.57	1325911	7.75	628348	11.08	601894	13.29	80818[c]	3.54
ZZZZZZ	859348	6.57	1356992	7.75	655939	11.08	651473	13.29	85995	3.54

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Outside control limits. Target analytes not associated with this internal standard.

Volatile Surrogate Recovery Summary

Job Number: MC40133
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Method: SW846 8260C **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC40133-1	V41325.D	108	104	96
MSV1493-BS	V41320.D	100	104	103
MSV1493-BSD	V41321.D	99	104	103
MSV1493-MB	V41323.D	106	101	99

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	72-133%
S2 = Toluene-D8	85-114%
S3 = 4-Bromofluorobenzene	70-134%

Initial Calibration Summary

Job Number: MC40133
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSV1479-ICC1479
Lab FileID: V41008.D

Response Factor Report MSV

Method : C:\msdchem\1\METHODS\v150714w.m (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Wed Jul 15 08:31:11 2015
Response via : Initial Calibration

Calibration Files
2 =v41004.D 0.5 =v41002.D 1 =v41003.D 25 =v41007.D
5 =v41005.D 10 =v41006.D 50 =v41008.D 100 =v41009.D
200 =v41010.D 400 =v41011.D = =

Compound	2	0.5	1	25	5	10	50	100	200	400	Avg	%RSD
1) I tert butyl alcohol-d9 ----------ISTD----------												
2) tertiary butyl alcohol	1.591		1.250	1.308	1.298	1.246	1.324	1.561	1.635		1.401	11.71
3) Ethanol	0.120		0.066	0.087	0.074	0.069	0.057	0.056			0.076	29.30
---- Linear regression ---- Coefficient = 0.9947												
Response Ratio = 0.02956 + 0.05716 *A												
4) I pentafluorobenzene ----------ISTD----------												
5) dichlorodifluoromethane	1.556		1.536	1.201	1.488	1.361	1.284	1.311	1.270	1.301	1.368	9.35
6) chloromethane	0.803	0.819	0.925	0.711	0.658	0.787	0.743	0.819	0.826	0.928	0.802	10.60
7) vinyl chloride	0.747	0.770	0.710	0.657	0.600	0.737	0.704	0.809	0.799	0.921	0.745	11.87
8) bromomethane	0.477	0.502	0.480	0.419	0.384	0.475	0.442	0.494	0.482	0.543	0.470	9.56
9) chloroethane	0.367		0.262	0.274	0.308	0.267	0.296	0.283	0.318		0.297	11.58
10) ethyl ether			0.170	0.177	0.176	0.172	0.198	0.168	0.219		0.183	10.28
11) acetonitrile	0.779		0.605	0.563	0.628	0.648	0.708	0.660	0.800		0.674	12.29
12) trichlorofluoromethane	1.345	1.297	1.256	1.140	1.084	1.306	1.178	1.247	1.192	1.316	1.236	6.87
13) freon-113	0.740	0.560	0.696	0.591	0.614	0.637	0.605	0.639	0.601	0.672	0.635	8.49
14) acrolein			0.010	0.008	0.012	0.011	0.012	0.012			0.011#	14.69
15) 1,1-dichloroethene	0.470	0.408	0.392	0.341	0.342	0.357	0.359	0.415	0.382	0.487	0.395	12.88
16) acetone			0.034	0.031	0.034	0.036	0.039	0.035	0.037		0.035#	7.62
17) Methyl Acetate			0.185	0.223	0.216	0.194	0.193	0.184	0.198		0.199	7.56
18) methylene chloride	0.607	0.576	0.515	0.412	0.445	0.469	0.431	0.485	0.430	0.539	0.491	13.52
19) methyl tert butyl ether	0.815	0.774	0.698	0.645	0.618	0.689	0.732	0.830	0.806	0.955	0.756	13.32
20) acrylonitrile			0.093	0.094	0.105	0.102	0.105	0.101	0.108		0.101	5.62
21) allyl chloride	0.862		0.637	0.605	0.609	0.626	0.648	0.707	0.659	0.799	0.684	13.16

Initial Calibration Summary

Job Number: MC40133
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSV1479-ICC1479
Lab FileID: V41008.D

22) trans-1,2-dichloroethene
0.506 0.476 0.461 0.399 0.409 0.418 0.418 0.433 0.414 0.471 0.440 8.08
23) iodomethane
1.098 0.892 0.803 0.829 0.862 0.859 1.009 0.927 1.160 0.938 13.29
24) carbon disulfide
1.597 1.587 1.627 1.144 1.229 1.242 1.170 1.331 1.208 1.521 1.366 14.29
25) propionitrile
0.036 0.034 0.038 0.039 0.042 0.040 0.043 0.039# 8.10
26) vinyl acetate
1.445 1.123 1.094 1.193 1.229 1.305 1.267 1.349 1.251 9.33
27) chloroprene
0.804 0.695 0.658 0.773 0.649 0.740 0.788 0.796 0.757 0.800 0.746 7.88
28) di-isopropyl ether
1.613 1.458 1.326 1.400 1.270 1.422 1.538 1.667 1.769 1.496 10.97
29) methacrylonitrile
0.224 0.182 0.172 0.192 0.199 0.208 0.203 0.211 0.199 8.31
30) 2-butanone
0.028 0.023 0.030 0.031 0.032 0.032 0.033 0.030# 11.77
31) Hexane
0.430 0.447 0.419 0.392 0.351 0.382 0.398 0.397 0.377 0.405 0.400 6.91
32) 1,1-dichloroethane
1.076 0.961 0.880 0.795 0.818 0.842 0.810 0.843 0.794 0.897 0.872 10.17
33) tert-butyl ethyl ether
1.099 0.896 0.950 0.846 0.971 1.094 1.259 1.242 1.045 14.74
34) isobutyl alcohol
0.000# -1.00
35) 2,2-dichloropropane
0.945 0.888 0.811 0.778 0.729 0.778 0.827 0.910 0.890 1.025 0.858 10.47
36) cis-1,2-dichloroethene
0.625 0.577 0.566 0.503 0.488 0.525 0.517 0.537 0.514 0.549 0.540 7.53
37) ethyl acetate
0.000# -1.00
38) bromochloromethane
0.358 0.304 0.298 0.274 0.275 0.303 0.288 0.296 0.287 0.306 0.299 7.96
39) chloroform
1.315 1.244 1.138 0.975 0.992 1.039 0.975 0.999 0.940 1.007 1.062 11.97
40) dibromofluoromethane (s)
0.604 0.618 0.614 0.585 0.603 0.587 0.576 0.566 0.562 0.562 0.588 3.58
41) Tetrahydrofuran
0.084 0.059 0.058 0.066 0.062 0.070 0.065 0.067 0.066 12.18
42) 1,1,1-trichloroethane
1.283 1.169 1.073 0.985 0.977 1.028 1.031 1.129 1.117 1.286 1.108 10.09

43) I 1,4-difluorobenzene ----------ISTD----------
44) Cyclohexane
0.847 0.572 0.589 0.597 0.584 0.599 0.578 0.637 0.625 14.69
45) carbon tetrachloride
0.663 0.499 0.566 0.588 0.546 0.616 0.605 0.620 0.606 0.675 0.598 8.77
46) 1,1-dichloropropene
0.470 0.423 0.389 0.410 0.383 0.419 0.415 0.410 0.388 0.401 0.411 6.10
47) benzene
1.362 1.279 1.167 1.067 1.041 1.128 1.076 1.088 1.021 1.063 1.129 9.81
48) 1,2-dichloroethane
0.537 0.480 0.460 0.415 0.418 0.461 0.432 0.438 0.410 0.422 0.447 8.73
49) tert-amyl methyl ether
0.463 0.386 0.373 0.404 0.351 0.411 0.466 0.518 0.514 0.432 14.08
50) heptane
0.318 0.294 0.280 0.323 0.259 0.295 0.335 0.337 0.316 0.318 0.307 8.09
51) trichloroethene
0.488 0.448 0.407 0.367 0.367 0.393 0.383 0.395 0.378 0.398 0.402 9.46

Initial Calibration Summary

Job Number: MC40133
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSV1479-ICC1479
Lab FileID: V41008.D

52) 1,2-dichloropropane
0.406 0.361 0.345 0.318 0.326 0.355 0.332 0.347 0.324 0.332 0.344 7.43
53) dibromomethane
0.237 0.214 0.203 0.177 0.179 0.197 0.186 0.197 0.187 0.200 0.198 9.12
54) bromodichloromethane
0.567 0.500 0.481 0.435 0.435 0.471 0.469 0.495 0.475 0.507 0.484 7.87
55) Methylcyclohexane
0.398 0.386 0.447 0.348 0.427 0.481 0.510 0.500 0.437 13.24
56) 2-chloroethyl vinyl ether
0.072 0.057 0.076 0.091 0.106 0.112 0.085 24.79
---- Linear regression ---- Coefficient = 0.9929
Response Ratio = -0.00760 + 0.10915 *A

57) methyl methacrylate
0.096 0.083 0.076 0.086 0.095 0.107 0.108 0.118 0.096 14.80
58) 1,4-dioxane
0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001# 21.08
---- Linear regression ---- Coefficient = 0.9973
Response Ratio = -0.00049 + 0.00147 *A

59) cis-1,3-dichloropropene
0.405 0.341 0.330 0.369 0.323 0.371 0.425 0.486 0.381 14.50
60) toluene-d8 (s)
1.088 1.078 1.095 1.097 1.093 1.098 1.129 1.172 1.200 1.235 1.128 4.83
61) 4-methyl-2-pentanone
0.167 0.130 0.142 0.127 0.149 0.170 0.182 0.180 0.188 0.159 14.39
62) toluene
0.979 1.040 0.858 0.748 0.748 0.808 0.798 0.852 0.814 0.850 0.850 11.06
63) trans-1,3-dichloropropene
0.304 0.245 0.255 0.269 0.234 0.278 0.310 0.364 0.368 0.292 16.76
---- Quadratic regression ---- Coefficient = 0.9968
Response Ratio = -0.00110 + 0.29908 *A + 0.01870 *A^2

64) 1,1,2-trichloroethane
0.224 0.195 0.190 0.173 0.173 0.193 0.188 0.199 0.194 0.212 0.194 8.09
65) ethyl methacrylate
0.162 0.167 0.134 0.165 0.202 0.224 0.232 0.255 0.193 21.71
---- Quadratic regression ---- Coefficient = 0.9988
Response Ratio = -0.00432 + 0.20310 *A + 0.00667 *A^2

66) I chlorobenzene-d5 ----------ISTD----------
67) tetrachloroethene
1.174 1.077 1.009 0.952 0.924 1.008 0.973 0.990 0.929 0.919 0.995 7.98
68) 1,3-dichloropropane
0.881 0.773 0.724 0.702 0.691 0.774 0.760 0.784 0.736 0.753 0.758 7.05
69) dibromochloromethane
0.817 0.681 0.704 0.670 0.642 0.720 0.734 0.776 0.754 0.784 0.728 7.60
70) 1,2-dibromoethane
0.548 0.495 0.433 0.434 0.424 0.478 0.478 0.506 0.480 0.512 0.479 8.23
71) 2-hexanone
0.303 0.229 0.253 0.226 0.268 0.298 0.315 0.291 0.296 0.275 11.85
72) chlorobenzene
2.907 2.630 2.502 2.215 2.220 2.456 2.282 2.331 2.122 1.857 2.352 12.33
73) 1,1,1,2-tetrachloroethane
1.134 0.986 1.007 0.935 0.884 1.003 0.972 0.977 0.897 0.828 0.962 8.70
74) ethylbenzene
4.180 3.659 3.536 3.650 3.324 3.817 3.744 3.816 3.322 3.672 7.25
75) m,p-xylene
1.573 1.336 1.277 1.428 1.314 1.496 1.472 1.484 1.356 1.132 1.387 9.34

Initial Calibration Summary

Job Number: MC40133
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSV1479-ICC1479
Lab FileID: V41008.D

```
76)  o-xylene
          1.524 1.212 1.236 1.481 1.244 1.493 1.565 1.590 1.473 1.358  1.418   10.10
77)  styrene
          2.138 1.522 1.624 2.157 1.884 2.256 2.264 2.300 2.117 1.753  2.001   14.19
78)  bromoform
          0.368       0.310 0.292 0.278 0.317 0.329 0.347 0.347 0.367  0.328    9.71
79)  trans-1,4-dichloro-2-butene
                            0.085 0.066 0.085 0.103 0.116 0.121 0.131  0.101   23.11
           ---- Quadratic regression ----  Coefficient =  0.9992
             Response Ratio = -0.00557 + 0.10962 *A + 0.00278 *A^2


80) I   1,4-dichlorobenzene-d ----------------ISTD---------------------
81)  isopropylbenzene
          3.719       2.909 3.972 3.105 3.703 4.135 4.314 3.561        3.677   13.15
82)  bromofluorobenzene (s)
          0.847 0.848 0.843 0.879 0.842 0.858 0.874 0.888 0.896 0.908  0.868    2.76
83)  bromobenzene
          1.046 0.914 0.931 0.870 0.797 0.905 0.910 0.979 0.920 0.943  0.921    7.04
84)  1,1,2,2-tetrachloroethane
          0.645 0.631 0.561 0.516 0.488 0.555 0.529 0.546 0.512 0.501  0.548    9.61
85)  1,2,3-trichloropropane
          0.470       0.397 0.407 0.322 0.428 0.430 0.465 0.453 0.481  0.428   11.45
86)  n-propylbenzene
                      3.740 4.404 3.638 4.302 4.456 4.562 3.571        4.096   10.44
87)  2-chlorotoluene
          2.978       2.426 2.651 2.404 2.693 2.658 2.815 2.576 1.944  2.572   11.47
88)  4-chlorotoluene
          3.264       2.593 2.879 2.673 2.960 2.889 3.018 2.775 2.180  2.803   10.90
89)  1,3,5-trimethylbenzene
          3.222       2.488 3.358 2.766 3.258 3.464 3.642 3.158        3.170   11.82
90)  tert-butylbenzene
          1.622 1.326 1.373 1.757 1.382 1.655 1.874 1.936 1.776 1.644  1.635   13.08
91)  1,2,4-trimethylbenzene
          3.235 2.667 2.522 3.454 2.862 3.448 3.535 3.710 3.160        3.177   12.95
92)  sec-butylbenzene
          3.745             4.073 3.253 3.943 4.226 4.398 3.538        3.882   10.29
93)  1,3-dichlorobenzene
          2.120 1.891 1.778 1.778 1.682 1.836 1.820 1.931 1.800 1.644  1.828    7.32
94)  p-isopropyltoluene
          3.282       2.491 3.663 2.836 3.514 3.773 3.955 3.275        3.349   14.64
95)  1,4-dichlorobenzene
          2.224 2.093 1.973 1.716 1.668 1.853 1.748 1.831 1.715 1.598  1.842   10.81
96)  1,2-dichlorobenzene
          2.006 1.754 1.700 1.693 1.598 1.779 1.722 1.782 1.663 1.519  1.722    7.50
97)  n-butylbenzene
          2.742 2.455 2.325 2.962 2.364 2.790 3.024 3.106 2.778 1.946  2.649   13.84
98)  1,2-dibromo-3-chloropropane
          0.077             0.058 0.057 0.064 0.065 0.069 0.071 0.076  0.067   11.38
99)  1,3,5-trichlorobenzene
          1.414 1.348 1.242 1.242 1.102 1.302 1.367 1.436 1.399 1.363  1.322    7.70
100)  1,2,4-trichlorobenzene
          0.827 0.760 0.678 0.762 0.621 0.796 0.878 0.941 0.961 0.982  0.821   14.71
101)  hexachlorobutadiene
          0.519 0.480 0.425 0.437 0.394 0.433 0.443 0.474 0.469 0.509  0.458    8.52
102)  naphthalene
          0.737             0.895 0.601 0.855 1.166 1.300 1.370 1.415  1.042   29.74
           ---- Quadratic regression ----  Coefficient =  0.9973
             Response Ratio = -0.04183 + 1.21806 *A + 0.02715 *A^2
```

Initial Calibration Summary

Job Number: MC40133
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSV1479-ICC1479
Lab FileID: V41008.D

```
103)  1,2,3-trichlorobenzene
            0.538             0.511 0.426 0.548 0.620 0.656              0.550   14.80
104)  2-Methylnaphthalene
                              0.152       0.151 0.240 0.348 0.410 0.463  0.294   45.25
              ---- Quadratic regression ----  Coefficient =  0.9959
                Response Ratio = -0.02791 + 0.32878 *A + 0.03667 *A^2

105)  1-Methylnaphthalene
                              0.127       0.128 0.206 0.283 0.314 0.334  0.232   39.68
              ---- Quadratic regression ----  Coefficient =  0.9956
                Response Ratio = -0.02298 + 0.27888 *A + 0.01617 *A^2

 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           v150714w.m        Wed Jul 15 08:56:10 2015
```

Initial Calibration Verification

Job Number: MC40133
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSV1479-ICV1479
Lab FileID: V41016.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\V150714\v41016.D Vial: 16
Acq On : 14 Jul 2015 7:20 pm Operator: jaclynb
Sample : icv1479-50 Inst : MSV
Misc : MS34820,MSV1479,,,,5,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\v150714w.m (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Wed Jul 15 09:02:28 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	105	0.00	3.56
2	p	tertiary butyl alcohol	1.401	1.261	10.0	107	0.01	3.66
			Amount	Calc.	%Drift			
3	p	Ethanol	5000.000	4306.115	13.9	79	0.00	2.49
			AvgRF	CCRF	%Dev			
4	I	pentafluorobenzene	1.000	1.000	0.0	106	0.00	6.59
5	p	dichlorodifluoromethane	1.368	1.031	24.6#	85	0.00	1.52
6	P	chloromethane	0.802	0.746	7.0	107	0.00	1.62
7	p	vinyl chloride	0.745	0.677	9.1	102	0.01	1.74
8	p	bromomethane	0.470	0.450	4.3	108	0.00	2.02
9	p	chloroethane	0.297	0.289	2.7	115	0.00	2.12
10	p	ethyl ether	0.183	0.219	-19.7	135	0.00	2.62
11	p	acetonitrile	0.674	0.760	-12.8	125	0.00	3.32
12	p	trichlorofluoromethane	1.236	1.078	12.8	97	0.00	2.37
13	p	freon-113	0.635	0.717	-12.9	126	0.00	2.92
14	p	acrolein	0.011	0.016#	-45.5#	163	0.01	2.79
15	p	1,1-dichloroethene	0.395	0.471	-19.2	140	0.00	2.89
16	p	acetone	0.035	0.052#	-48.6#	153	0.02	2.94
17	p	Methyl Acetate	0.199	0.175	12.1	96	0.00	3.31
18	p	methylene chloride	0.491	0.499	-1.6	123	0.00	3.49
19	p	methyl tert butyl ether	0.756	0.855	-13.1	124	0.01	3.87
20	p	acrylonitrile	0.101	0.110	-8.9	115	0.00	3.82
21	p	allyl chloride	0.684	0.760	-11.1	125	0.00	3.32
22	p	trans-1,2-dichloroethene	0.440	0.442	-0.5	113	0.00	3.86
23	p	iodomethane	0.938	1.288	-37.3#	159	0.00	3.06
24	p	carbon disulfide	1.366	1.828	-33.8#	166	0.01	3.15
25	p	propionitrile	0.039	0.040#	-2.6	109	0.00	5.70
26	p	vinyl acetate	1.251	1.406	-12.4	122	0.00	4.61
27	p	chloroprene	0.746	0.790	-5.9	107	0.01	4.65
28	p	di-isopropyl ether	1.496	1.619	-8.2	112	0.00	4.64
29	p	methacrylonitrile	0.199	0.203	-2.0	108	0.00	5.96
30	p	2-butanone	0.030	0.041#	-36.7#	144	0.00	5.58
31	p	Hexane	0.400	0.457	-14.2	122	0.00	4.28
32	P	1,1-dichloroethane	0.872	0.854	2.1	112	0.00	4.54
33	p	tert-butyl ethyl ether	1.045	1.125	-7.7	109	0.00	5.31
34	p	isobutyl alcohol	0.000	0.281	0.0	0#	0.04	4.61
35	p	2,2-dichloropropane	0.858	0.829	3.4	107	0.00	5.58
36	p	cis-1,2-dichloroethene	0.540	0.585	-8.3	120	0.00	5.57
37	p	ethyl acetate	0.000	1.399	0.0	0#	0.04	4.61

Initial Calibration Verification

Job Number: MC40133
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSV1479-ICV1479
Lab FileID: V41016.D

38	p	bromochloromethane	0.299	0.300	-0.3	111	0.00	5.99
39	p	chloroform	1.062	0.981	7.6	107	0.00	6.20
40	S	dibromofluoromethane (s)	0.588	0.567	3.6	105	0.00	6.48
41	p	Tetrahydrofuran	0.066	0.064	3.0	111	0.00	6.00
42	p	1,1,1-trichloroethane	1.108	1.055	4.8	109	0.00	6.45
43	I	1,4-difluorobenzene	1.000	1.000	0.0	107	0.00	7.77
44	p	Cyclohexane	0.625	0.616	1.4	113	0.00	6.56
45	p	carbon tetrachloride	0.598	0.587	1.8	104	0.00	6.70
46	p	1,1-dichloropropene	0.411	0.383	6.8	99	0.00	6.72
47	p	benzene	1.129	1.140	-1.0	114	0.00	7.04
48	p	1,2-dichloroethane	0.447	0.425	4.9	106	0.00	7.16
49	p	tert-amyl methyl ether	0.432	0.483	-11.8	111	0.00	7.32
50	p	heptane	0.307	0.358	-16.6	115	0.00	7.59
51	p	trichloroethene	0.402	0.377	6.2	106	0.00	8.06
52	p	1,2-dichloropropane	0.344	0.327	4.9	106	0.00	8.41
53	p	dibromomethane	0.198	0.187	5.6	108	0.00	8.51
54	p	bromodichloromethane	0.484	0.430	11.2	99	0.00	8.76
55	p	Methylcyclohexane	0.437	0.483	-10.5	108	0.00	8.36
		----------	Amount	Calc.	%Drift	----------		
56	p	2-chloroethyl vinyl ether	50.000	43.728	12.5	104	0.00	9.13
		----------	AvgRF	CCRF	%Dev	----------		
57	p	methyl methacrylate	0.096	0.093	3.1	105	0.00	8.54
		----------	Amount	Calc.	%Drift	----------		
58	p	1,4-dioxane	250.000	216.920	13.2	106	0.00	8.54
		----------	AvgRF	CCRF	%Dev	----------		
59	p	cis-1,3-dichloropropene	0.381	0.429	-12.6	108	0.00	9.29
60	S	toluene-d8 (s)	1.128	1.122	0.5	107	0.00	9.57
61	p	4-methyl-2-pentanone	0.159	0.175	-10.1	111	0.00	9.47
62	p	toluene	0.850	0.793	6.7	107	0.00	9.65
		----------	Amount	Calc.	%Drift	----------		
63	p	trans-1,3-dichloropropene	50.000	47.405	5.2	104	0.00	9.93
		----------	AvgRF	CCRF	%Dev	----------		
64	p	1,1,2-trichloroethane	0.194	0.181	6.7	103	0.00	10.14
		----------	Amount	Calc.	%Drift	----------		
65	p	ethyl methacrylate	50.000	50.748	-1.5	111	0.00	10.01
		----------	AvgRF	CCRF	%Dev	----------		
66	I	chlorobenzene-d5	1.000	1.000	0.0	106	0.00	11.10
67	p	tetrachloroethene	0.995	0.948	4.7	103	0.00	10.20
68	p	1,3-dichloropropane	0.758	0.761	-0.4	106	0.00	10.30
69	p	dibromochloromethane	0.728	0.672	7.7	97	0.00	10.52
70	p	1,2-dibromoethane	0.479	0.469	2.1	104	0.00	10.63
71	p	2-hexanone	0.275	0.409	-48.7#	146	0.00	10.37
72	P	chlorobenzene	2.352	2.228	5.3	104	0.00	11.12
73	p	1,1,1,2-tetrachloroethane	0.962	0.948	1.5	103	0.00	11.22
74	p	ethylbenzene	3.672	3.692	-0.5	105	0.00	11.23
75	p	m,p-xylene	1.387	1.445	-4.2	104	0.00	11.36
76	p	o-xylene	1.418	1.541	-8.7	104	0.00	11.73
77	p	styrene	2.001	2.229	-11.4	105	0.00	11.75
78	P	bromoform	0.328	0.298	9.1	96	0.00	11.92

Initial Calibration Verification

Job Number: MC40133
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSV1479-ICV1479
Lab FileID: V41016.D

			Amount	Calc.	%Drift			
79	p	trans-1,4-dichloro-2-bute	50.000	52.825	-5.7	116	0.00	12.14

			AvgRF	CCRF	%Dev			
80	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	104	0.00	13.30
81	p	isopropylbenzene	3.677	4.071	-10.7	102	0.00	12.08
82	S	bromofluorobenzene (s)	0.868	0.876	-0.9	104	0.00	12.24
83	p	bromobenzene	0.921	0.919	0.2	105	0.00	12.37
84	P	1,1,2,2-tetrachloroethane	0.548	0.522	4.7	103	0.00	12.37
85	p	1,2,3-trichloropropane	0.428	0.442	-3.3	107	0.00	12.42
86	p	n-propylbenzene	4.096	4.268	-4.2	99	0.00	12.46
87	p	2-chlorotoluene	2.572	2.668	-3.7	104	0.00	12.54
88	p	4-chlorotoluene	2.803	2.871	-2.4	103	0.00	12.66
89	p	1,3,5-trimethylbenzene	3.170	3.507	-10.6	105	0.00	12.63
90	p	tert-butylbenzene	1.635	1.823	-11.5	101	0.00	12.92
91	p	1,2,4-trimethylbenzene	3.177	3.471	-9.3	102	0.00	12.97
92	p	sec-butylbenzene	3.882	4.056	-4.5	100	0.00	13.12
93	p	1,3-dichlorobenzene	1.828	1.785	2.4	102	0.00	13.23
94	p	p-isopropyltoluene	3.349	3.638	-8.6	100	0.00	13.26
95	p	1,4-dichlorobenzene	1.842	1.713	7.0	102	0.00	13.33
96	p	1,2-dichlorobenzene	1.722	1.691	1.8	102	0.00	13.64
97	p	n-butylbenzene	2.649	2.860	-8.0	98	0.00	13.63
98	p	1,2-dibromo-3-chloropropa	0.067	0.059	11.9	94	0.00	14.34
99	p	1,3,5-trichlorobenzene	1.322	1.187	10.2	90	0.00	14.51
100	p	1,2,4-trichlorobenzene	0.821	0.868	-5.7	103	0.00	15.06
101	p	hexachlorobutadiene	0.458	0.437	4.6	102	0.00	15.18

			Amount	Calc.	%Drift			
102	p	naphthalene	50.000	45.264	9.5	96	0.00	15.30

			AvgRF	CCRF	%Dev			
103	p	1,2,3-trichlorobenzene	0.550	0.626	-13.8	105	0.00	15.49

			Amount	Calc.	%Drift			
104	p	2-Methylnaphthalene	25.000	33.505	-34.0#	181	0.00	16.30
105	p	1-Methylnaphthalene	25.000	38.262	-53.0#	202	0.00	16.47

(#) = Out of Range SPCC's out = 4 CCC's out = 0
v41008.D v150714w.m Wed Jul 15 09:42:53 2015

Continuing Calibration Summary

Job Number: MC40133
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSV1493-CC1479
Lab FileID: V41320.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\V150723\v41320.D Vial: 2
Acq On : 23 Jul 2015 9:26 am Operator: jaclynb
Sample : cc1479-50 Inst : MSV
Misc : MS34889,MSV1493,,,,5,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\v150714w.m (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Jul 21 11:45:30 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	98	0.00	3.55
2	p	tertiary butyl alcohol	1.401	1.206	13.9	95	-0.01	3.64
			Amount	Calc.	%Drift			
3	p	Ethanol	5000.000	4229.288	15.4	72	0.00	2.48
			AvgRF	CCRF	%Dev			
4	I	pentafluorobenzene	1.000	1.000	0.0	92	-0.02	6.57
5	p	dichlorodifluoromethane	1.368	1.412	-3.2	101	0.00	1.52
6	P	chloromethane	0.802	0.937	-16.8	116	0.00	1.62
7	p	vinyl chloride	0.745	0.845	-13.4	110	0.00	1.73
8	p	bromomethane	0.470	0.554	-17.9	115	0.00	2.02
9	p	chloroethane	0.297	0.350	-17.8	121	0.00	2.12
10	p	ethyl ether	0.183	0.252	-37.7#	135	0.00	2.61
11	p	acetonitrile	0.674	0.821	-21.8#	117	0.00	3.31
12	p	trichlorofluoromethane	1.236	1.328	-7.4	104	0.00	2.36
13	p	freon-113	0.635	0.837	-31.8#	127	0.00	2.92
14	p	acrolein	0.011	0.017#	-54.5#	147	0.00	2.77
15	p	1,1-dichloroethene	0.395	0.505	-27.8#	129	0.00	2.88
16	p	acetone	0.035	0.045#	-28.6#	116	0.00	2.93
17	p	Methyl Acetate	0.199	0.180	9.5	85	-0.01	3.29
18	p	methylene chloride	0.491	0.514	-4.7	110	0.00	3.48
19	p	methyl tert butyl ether	0.756	0.864	-14.3	109	0.00	3.85
20	p	acrylonitrile	0.101	0.115	-13.9	104	0.00	3.81
21	p	allyl chloride	0.684	0.819	-19.7	116	0.00	3.31
22	p	trans-1,2-dichloroethene	0.440	0.466	-5.9	103	-0.01	3.85
23	p	iodomethane	0.938	1.276	-36.0#	137	0.00	3.05
24	p	carbon disulfide	1.366	1.843	-34.9#	145	0.00	3.14
25	p	propionitrile	0.039	0.042#	-7.7	98	-0.01	5.68
26	p	vinyl acetate	1.251	1.485	-18.7	111	-0.01	4.59
27	p	chloroprene	0.746	0.884	-18.5	103	-0.02	4.64
28	p	di-isopropyl ether	1.496	1.700	-13.6	102	-0.01	4.62
29	p	methacrylonitrile	0.199	0.203	-2.0	94	-0.01	5.94
30	p	2-butanone	0.030	0.036#	-20.0	109	-0.01	5.56
31	p	Hexane	0.400	0.522	-30.5#	121	-0.01	4.26
32	P	1,1-dichloroethane	0.872	0.917	-5.2	104	-0.01	4.52
33	p	tert-butyl ethyl ether	1.045	1.177	-12.6	99	-0.01	5.29
34	p	isobutyl alcohol			NA			
35	p	2,2-dichloropropane	0.858	1.001	-16.7	111	-0.01	5.57
36	p	cis-1,2-dichloroethene	0.540	0.593	-9.8	106	-0.02	5.55
37	p	ethyl acetate	0.000	1.471	0.0	0#	-0.01	4.59

Continuing Calibration Summary

Job Number: MC40133
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSV1493-CC1479
Lab FileID: V41320.D

38	p	bromochloromethane	0.299	0.305	-2.0	97	-0.02	5.97
39	p	chloroform	1.062	1.058	0.4	100	-0.02	6.18
40	S	dibromofluoromethane (s)	0.588	0.589	-0.2	94	-0.02	6.45
41	p	Tetrahydrofuran	0.066	0.065	1.5	98	-0.02	5.98
42	p	1,1,1-trichloroethane	1.108	1.205	-8.8	107	-0.01	6.43
43	I	1,4-difluorobenzene	1.000	1.000	0.0	89	-0.01	7.75
44	p	Cyclohexane	0.625	0.719	-15.0	110	-0.01	6.54
45	p	carbon tetrachloride	0.598	0.722	-20.7#	107	-0.01	6.68
46	p	1,1-dichloropropene	0.411	0.418	-1.7	90	-0.02	6.70
47	p	benzene	1.129	1.167	-3.4	97	-0.02	7.01
48	p	1,2-dichloroethane	0.447	0.466	-4.3	96	-0.01	7.14
49	p	tert-amyl methyl ether	0.432	0.533	-23.4#	102	-0.01	7.30
50	p	heptane	0.307	0.406	-32.2#	108	-0.01	7.57
51	p	trichloroethene	0.402	0.392	2.5	91	-0.01	8.05
52	p	1,2-dichloropropane	0.344	0.336	2.3	90	-0.01	8.39
53	p	dibromomethane	0.198	0.196	1.0	94	-0.01	8.50
54	p	bromodichloromethane	0.484	0.463	4.3	88	-0.01	8.75
55	p	Methylcyclohexane	0.437	0.556	-27.2#	103	-0.01	8.35
		----------	Amount	Calc.	%Drift	----------		
56	p	2-chloroethyl vinyl ether	50.000	47.886	4.2	96	-0.01	9.12
		----------	AvgRF	CCRF	%Dev	----------		
57	p	methyl methacrylate	0.096	0.096	0.0	90	-0.01	8.52
		----------	Amount	Calc.	%Drift	----------		
58	p	1,4-dioxane	250.000	211.091	15.6	86	0.00	8.51
		----------	AvgRF	CCRF	%Dev	----------		
59	p	cis-1,3-dichloropropene	0.381	0.468	-22.8#	98	-0.01	9.27
60	S	toluene-d8 (s)	1.128	1.177	-4.3	93	-0.01	9.56
61	p	4-methyl-2-pentanone	0.159	0.182	-14.5	96	-0.01	9.45
62	p	toluene	0.850	0.846	0.5	95	-0.01	9.63
		----------	Amount	Calc.	%Drift	----------		
63	p	trans-1,3-dichloropropene	50.000	54.070	-8.1	99	-0.01	9.92
		----------	AvgRF	CCRF	%Dev	----------		
64	p	1,1,2-trichloroethane	0.194	0.195	-0.5	92	-0.01	10.13
		----------	Amount	Calc.	%Drift	----------		
65	p	ethyl methacrylate	50.000	54.507	-9.0	100	-0.01	10.00
		----------	AvgRF	CCRF	%Dev	----------		
66	I	chlorobenzene-d5	1.000	1.000	0.0	97	0.00	11.08
67	p	tetrachloroethene	0.995	0.927	6.8	93	-0.01	10.19
68	p	1,3-dichloropropane	0.758	0.765	-0.9	98	-0.01	10.29
69	p	dibromochloromethane	0.728	0.683	6.2	91	-0.01	10.51
70	p	1,2-dibromoethane	0.479	0.471	1.7	96	-0.01	10.62
71	p	2-hexanone	0.275	0.343	-24.7#	112	0.00	10.36
72	P	chlorobenzene	2.352	2.237	4.9	96	0.00	11.11
73	p	1,1,1,2-tetrachloroethane	0.962	0.924	4.0	93	0.00	11.21
74	p	ethylbenzene	3.672	3.739	-1.8	97	0.00	11.22
75	p	m,p-xylene	1.387	1.467	-5.8	97	0.00	11.35
76	p	o-xylene	1.418	1.518	-7.1	94	0.00	11.71
77	p	styrene	2.001	2.266	-13.2	98	0.00	11.74
78	P	bromoform	0.328	0.307	6.4	91	0.00	11.91

Continuing Calibration Summary

Job Number: MC40133
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSV1493-CC1479
Lab FileID: V41320.D

			Amount	Calc.	%Drift			
79	p	trans-1,4-dichloro-2-bute	50.000	66.680	-33.4#	137	0.00	12.13

			AvgRF	CCRF	%Dev			
80	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	95	0.00	13.29
81	p	isopropylbenzene	3.677	4.214	-14.6	96	0.00	12.07
82	S	bromofluorobenzene (s)	0.868	0.892	-2.8	97	0.00	12.23
83	p	bromobenzene	0.921	0.929	-0.9	97	0.00	12.36
84	P	1,1,2,2-tetrachloroethane	0.548	0.541	1.3	97	0.00	12.36
85	p	1,2,3-trichloropropane	0.428	0.466	-8.9	103	-0.01	12.40
86	p	n-propylbenzene	4.096	4.561	-11.4	97	0.00	12.45
87	p	2-chlorotoluene	2.572	2.820	-9.6	100	0.00	12.53
88	p	4-chlorotoluene	2.803	3.075	-9.7	101	0.00	12.64
89	p	1,3,5-trimethylbenzene	3.170	3.733	-17.8	102	0.00	12.62
90	p	tert-butylbenzene	1.635	1.911	-16.9	96	0.00	12.91
91	p	1,2,4-trimethylbenzene	3.177	3.694	-16.3	99	0.00	12.96
92	p	sec-butylbenzene	3.882	4.394	-13.2	98	0.00	13.11
93	p	1,3-dichlorobenzene	1.828	1.850	-1.2	96	0.00	13.22
94	p	p-isopropyltoluene	3.349	3.962	-18.3	99	0.00	13.25
95	p	1,4-dichlorobenzene	1.842	1.772	3.8	96	0.00	13.32
96	p	1,2-dichlorobenzene	1.722	1.739	-1.0	96	0.00	13.63
97	p	n-butylbenzene	2.649	3.186	-20.3#	100	0.00	13.62
98	p	1,2-dibromo-3-chloropropa	0.067	0.066	1.5	96	0.00	14.33
99	p	1,3,5-trichlorobenzene	1.322	1.171	11.4	81	0.00	14.50
100	p	1,2,4-trichlorobenzene	0.821	0.842	-2.6	91	0.00	15.05
101	p	hexachlorobutadiene	0.458	0.473	-3.3	101	0.00	15.17

			Amount	Calc.	%Drift			
102	p	naphthalene	50.000	45.904	8.2	89	0.00	15.29

			AvgRF	CCRF	%Dev			
103	p	1,2,3-trichlorobenzene	0.550	0.688	-25.1#	105	0.00	15.48

			Amount	Calc.	%Drift			
104	p	2-Methylnaphthalene	25.000	71.722	-186.9#	409	0.00	16.29
105	p	1-Methylnaphthalene	25.000	84.464	-237.9#	454	0.00	16.46

(#) = Out of Range SPCC's out = 5 CCC's out = 0
v41224.D v150714w.m Thu Jul 23 11:25:42 2015

New England ACCUTEST LABORATORIES

12/23/15

Technical Report for

GEI Consultants, Inc.

GEI Tufts Street Somerville MA

045163

Accutest Job Number: MC40134

Sampling Date: 07/19/15

Report to:

GEI Consultants, Inc.

CMalagrida@geiconsultants.com

ATTN: Catherine Malagrida

Total number of pages in report: **122**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Reza Tand
Lab Director

Client Service contact: Frank DAgostino 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) WI (399080220) DoD ELAP (L-A-B L2235)

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Test results relate only to samples analyzed.

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Sample Summary

GEI Consultants, Inc.

Job No: MC40134

GEI Tufts Street Somerville MA
Project No: 045163

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC40134-1	07/19/15	06:01	MLK	07/20/15	AIR	Indoor Air Comp.	045163-29KNOW-1
MC40134-2	07/19/15	05:28	MLK	07/20/15	AIR	Indoor Air Comp.	045163-29KNOW-B

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	GEI Consultants, Inc.	**Job No**	MC40134
Site:	GEI Tufts Street Somerville MA	**Report Date**	7/28/2015 12:50:03 PM

2 Sample(s) were collected on 07/19/2015 and were received at Accutest on 07/20/2015, at AMB and intact. These Samples received an Accutest job number of MC40134. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method TO-15

Matrix: AIR **Batch ID:** MSQ1339

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC40134-2DUP were used as the QC samples indicated.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety.The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(MC40134).

Summary of Hits

Job Number: MC40134
Account: GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA
Collected: 07/19/15

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method

MC40134-1 **045163-29KNOW-1**

No hits reported in this sample.

MC40134-2 **045163-29KNOW-B**

No hits reported in this sample.

New England ACCUTEST LABORATORIES

4

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	045163-29KNOW-1		
Lab Sample ID:	MC40134-1	**Date Sampled:**	07/19/15
Matrix:	AIR - Indoor Air Comp. Summa ID: M115	**Date Received:**	07/20/15
Method:	TO-15	**Percent Solids:**	n/a
Project:	GEI Tufts Street Somerville MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q30820.D	1	07/27/15	DRY	n/a	n/a	MSQ1339
Run #2							

	Initial Volume
Run #1	400 ml
Run #2	

VOA Special List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	0.078	ppbv		ND	0.81	0.32	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	0.14	ppbv		ND	0.79	0.56	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	0.13	ppbv		ND	0.79	0.52	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	0.093	ppbv		ND	0.79	0.37	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	0.095	ppbv		ND	1.1	0.52	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	0.18	ppbv		ND	1.4	1.2	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	0.16	ppbv		ND	1.1	0.87	ug/m3
127-18-4	165.8	Tetrachloroethylene	ND	0.20	0.16	ppbv		ND	1.4	1.1	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.20	0.15	ppbv		ND	1.1	0.81	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	0.13	ppbv		ND	0.51	0.33	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	102%		50-129%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	045163-29KNOW-B		
Lab Sample ID:	MC40134-2	**Date Sampled:**	07/19/15
Matrix:	AIR - Indoor Air Comp. Summa ID: M413	**Date Received:**	07/20/15
Method:	TO-15	**Percent Solids:**	n/a
Project:	GEI Tufts Street Somerville MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q30821.D	1	07/27/15	DRY	n/a	n/a	MSQ1339
Run #2							

	Initial Volume
Run #1	400 ml
Run #2	

VOA Special List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	0.078	ppbv		ND	0.81	0.32	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	0.14	ppbv		ND	0.79	0.56	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	0.13	ppbv		ND	0.79	0.52	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	0.093	ppbv		ND	0.79	0.37	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	0.095	ppbv		ND	1.1	0.52	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	0.18	ppbv		ND	1.4	1.2	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	0.16	ppbv		ND	1.1	0.87	ug/m3
127-18-4	165.8	Tetrachloroethylene	ND	0.20	0.16	ppbv		ND	1.4	1.1	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.20	0.15	ppbv		ND	1.1	0.81	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	0.13	ppbv		ND	0.51	0.33	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	110%		50-129%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

New England ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Summa Canister and Flow Controller Log
- Sample Tracking Chronicle

CHAIN OF CUSTODY

ACCUTEST

Air Sampling Field Data Sheet

FED-EX Tracking #: | Bottle Order Control #: | PAGE 1 OF 2

Lab Quote #: | Lab Job #: MC40134

Client / Reporting Information

Company Name: GEI Consultants, Inc.
Address: 400 Unicorn Park Drive
City: Woburn State: MA Zip: 01801
Project Contact: Joe Roman E-mail: jroman@geiconsultants.com
Phone #: 781-721-4000 Fax #: 781-721-4073
Sampler(s) Name(s):

Project Name: Tufts Street
Street:
City: Somerville State: MA
Project #: 045163
Client Purchase Order #:

Weather Parameters

Temperature (Fahrenheit)
Start: 68.4 Maximum:
Stop: 72.3 Minimum:
Atmosphpheric Pressure (Inches of Hg)
Start: 30.00 Maximum:
Stop: 29.83 Minimum:
Other weather comment:

Requested Analysis

Lab Sample #	Field ID / Point of Collection	Air Type: Indoor(I) Soil Vap(SV) Ambient(A)	Sampling Equipment Info: Canister Serial #	Canister Size 6L or 1L	Flow Controller Serial #	Start Sampling Information: Date	Time (24hr clock)	Canister Pressure ("Hg)	Interior Temp (F)	Sampler Init	Stop Sampling Information: Date	Time (24hr clock)	Canister Pressure ("Hg)	Interior Temp (F)	Sampler Init	Standard TO-15 Reporting List	MA DEP APH	Modified TO-15 list (attached) *
-1	045163-29 KNOW-I	IA	M115	6L	MC139	7/18/15	0644	30+	75.7	MLK	7/19/15	0601	5	76.2	MLK			X
-2	045163-29 KNOW-B	IA	M413	6L	MC095	7/18/15	0644	27	76.6	MLK	7/19/15	0528	0	74.3	MLK			X

* see attached

Turnaround Time (Business days)

Standard - 15 Days
10 Day
5 Day X
3 Day
2 Day
1 Day
Other

Approved By:
Date:

Data Deliverable Information

Comm A
Comm B
Full T1
Other: Ambi

Comments / Remarks

*See attached site specific reporting list *

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 Margaret Kull	7/19/15 0620	1 GEI Sample Room	2		2
3 Jeremy Donaghy	14:14 7/20	3 [illegible]	4 [illegible]	7/20/15 16:30	4 [illegible]
5		5	Custody Seal #		

Tel: (508) 481-6200
Fax: (508) 481-7753

Accutest Laboratories of New England

MC40134: Chain of Custody
Page 1 of 3

MC40134
Page 2 of 2

045163 Tufts St.

Indoor Air Sampling Analyte List

- 1,1-Dichloroethane
- 1,1-Dichloroethylene
- trans-1,2-Dichloroethylene
- cis-1,2-Dichloroethylene
- 1,1,1-Trichloroethane
- 1,1,2,2-Tetrachloroethane
- 1,1,2-Trichloroethane
- Tetrachloroethylene
- Trichloroethylene
- Vinyl Chloride

MC40134: Chain of Custody
Page 2 of 3

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC40134 **Client:** GEI **Project:**

Date / Time Received: 7/20/2015 4:00:00 PM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Initial/Adjusted):

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Thermometer ID:			
3. Cooler media:			
4. No. Coolers:	0		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Accutest Laboratories
V:(508) 481-6200

495 Technology Center West, Bldg One
F: (508) 481-7753

Marlborough, MA 01752
www/accutest.com

MC40134: Chain of Custody
Page 3 of 3

Summa Canister and Flow Controller Log

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA
Received: 07/20/15

SUMMA CANISTERS

Shipping							Receiving						
Summa ID	L	Vac " Hg	Date Out	By	SCC Batch	SCC FileID	Sample Number	Date In	By	Vac " Hg	Pres psig	Final psig	Dil Fact
M115	6	29.4	07/15/15	AA	CP1678	J32268.D	MC40134-1	07/22/15	AA	4			1
M413	6	29.4	07/15/15	AA	CP1674	J32196.D	MC40134-2	07/22/15	AA	0			1

FLOW CONTROLLERS / OTHER

Shipping					Receiving			
Flow Crtl ID	Date Out	By	cc/ min	Time hrs.	Date In	By	cc/ min	Equipment Type
MC095	07/15/15	AA	4.3	24	07/28/15	PN	6.7	Flow Controller
MC139	07/15/15	AA	4.3	24	07/28/15	PN	5.9	Flow Controller

Accutest Bottle Order(s):
AA/07-15-15/GEI/50 TUFTS ST

Prep Date	Room Temp(F)	Bar Pres "Hg
07/15/15	70	29.92

Internal Sample Tracking Chronicle

GEI Consultants, Inc.

Job No: MC40134

GEI Tufts Street Somerville MA
Project No: 045163

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC40134-1 Collected: 19-JUL-15 06:01 By: MLK 045163-29KNOW-1				Received: 20-JUL-15	By: BA	
MC40134-1	TO-15	27-JUL-15 13:41	DRY			VTO15STD
MC40134-2 Collected: 19-JUL-15 05:28 By: MLK 045163-29KNOW-B				Received: 20-JUL-15	By: BA	
MC40134-2	TO-15	27-JUL-15 14:33	DRY			VTO15STD

New England ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Initial Calibration RT/ISTD Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSQ1339-MB	Q30819.D	1	07/27/15	DRY	n/a	n/a	MSQ1339

The QC reported here applies to the following samples: **Method:** TO-15

MC40134-1, MC40134-2

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-34-3	1,1-Dichloroethane	ND	0.20	0.078	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.14	ppbv		ND	0.79	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.13	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.093	ppbv		ND	0.79	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.095	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.18	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.16	ppbv		ND	1.1	ug/m3
127-18-4	Tetrachloroethylene	ND	0.20	0.16	ppbv		ND	1.4	ug/m3
79-01-6	Trichloroethylene	ND	0.20	0.15	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	0.13	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	104%	50-129%

Method Blank Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSQ1324-MB	Q30527.D	1	07/05/15	AA	n/a	n/a	MSQ1324

The QC reported here applies to the following samples: **Method:** TO-15

MSQ1324-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-34-3	1,1-Dichloroethane	ND	0.20	0.078	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.14	ppbv		ND	0.79	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.13	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.093	ppbv		ND	0.79	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.095	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.18	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.16	ppbv		ND	1.1	ug/m3
127-18-4	Tetrachloroethylene	ND	0.20	0.16	ppbv		ND	1.4	ug/m3
79-01-6	Trichloroethylene	ND	0.20	0.15	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	0.13	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	94%	50-129%

Method Blank Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSJ1614-MB	J32267.D	1	07/14/15	PN	n/a	n/a	MSJ1614

The QC reported here applies to the following samples: **Method:** TO-15

MSJ1614-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-34-3	1,1-Dichloroethane	ND	0.20	0.078	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.14	ppbv		ND	0.79	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.13	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.093	ppbv		ND	0.79	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.095	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.18	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.16	ppbv		ND	1.1	ug/m3
127-18-4	Tetrachloroethylene	ND	0.20	0.16	ppbv		ND	1.4	ug/m3
79-01-6	Trichloroethylene	ND	0.20	0.15	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	0.13	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	88%	50-129%

Blank Spike Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSQ1339-BS	Q30817B.D	1	07/27/15	DRY	n/a	n/a	MSQ1339

The QC reported here applies to the following samples: **Method:** TO-15

MC40134-1, MC40134-2

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	Limits
75-34-3	1,1-Dichloroethane	10	12.1	121	70-130
75-35-4	1,1-Dichloroethylene	10	10.6	106	70-130
156-60-5	trans-1,2-Dichloroethylene	10	10.8	108	70-130
156-59-2	cis-1,2-Dichloroethylene	10	10.8	108	70-130
71-55-6	1,1,1-Trichloroethane	10	11.2	112	70-130
79-34-5	1,1,2,2-Tetrachloroethane	10	7.4	74	70-130
79-00-5	1,1,2-Trichloroethane	10	10.0	100	70-130
127-18-4	Tetrachloroethylene	10	10.2	102	70-130
79-01-6	Trichloroethylene	10	9.7	97	70-130
75-01-4	Vinyl chloride	10	11.5	115	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	103%	50-129%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSQ1324-BS	Q30525A.D	1	07/05/15	AA	n/a	n/a	MSQ1324

The QC reported here applies to the following samples: **Method:** TO-15

MSQ1324-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	Limits
75-34-3	1,1-Dichloroethane	10	10.3	103	70-130
75-35-4	1,1-Dichloroethylene	10	9.7	97	70-130
156-60-5	trans-1,2-Dichloroethylene	10	9.8	98	70-130
156-59-2	cis-1,2-Dichloroethylene	10	9.4	94	70-130
71-55-6	1,1,1-Trichloroethane	10	10.4	104	70-130
79-34-5	1,1,2,2-Tetrachloroethane	10	10.6	106	70-130
79-00-5	1,1,2-Trichloroethane	10	9.4	94	70-130
127-18-4	Tetrachloroethylene	10	9.7	97	70-130
79-01-6	Trichloroethylene	10	8.8	88	70-130
75-01-4	Vinyl chloride	10	9.1	91	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	96%	50-129%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSJ1614-BS	J32265C.D	1	07/14/15	PN	n/a	n/a	MSJ1614

The QC reported here applies to the following samples: **Method:** TO-15

MSJ1614-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	Limits
75-34-3	1,1-Dichloroethane	10	9.5	95	70-130
75-35-4	1,1-Dichloroethylene	10	10.3	103	70-130
156-60-5	trans-1,2-Dichloroethylene	10	9.4	94	70-130
156-59-2	cis-1,2-Dichloroethylene	10	9.5	95	70-130
71-55-6	1,1,1-Trichloroethane	10	9.4	94	70-130
79-34-5	1,1,2,2-Tetrachloroethane	10	10.9	109	70-130
79-00-5	1,1,2-Trichloroethane	10	10.1	101	70-130
127-18-4	Tetrachloroethylene	10	9.1	91	70-130
79-01-6	Trichloroethylene	10	10.1	101	70-130
75-01-4	Vinyl chloride	10	11.8	118	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	100%	50-129%

* = Outside of Control Limits.

Duplicate Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC40134-2DUP	Q30822.D	1	07/27/15	DRY	n/a	n/a	MSQ1339
MC40134-2	Q30821.D	1	07/27/15	DRY	n/a	n/a	MSQ1339

The QC reported here applies to the following samples: **Method:** TO-15

MC40134-1, MC40134-2

CAS No.	Compound	MC40134-2 ppbv	Q	DUP ppbv	Q	RPD	Limits
75-34-3	1,1-Dichloroethane	ND		ND		nc	25
75-35-4	1,1-Dichloroethylene	ND		ND		nc	25
156-60-5	trans-1,2-Dichloroethylene	ND		ND		nc	25
156-59-2	cis-1,2-Dichloroethylene	ND		ND		nc	25
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	25
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	25
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	25
127-18-4	Tetrachloroethylene	ND		ND		nc	25
79-01-6	Trichloroethylene	ND		ND		nc	25
75-01-4	Vinyl chloride	ND		ND		nc	25

CAS No.	Surrogate Recoveries	DUP	MC40134-2	Limits
460-00-4	4-Bromofluorobenzene	114%	110%	50-129%

* = Outside of Control Limits.

Summa Cleaning Certification

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSQ1324-SCC	Q30526.D	1	07/05/15	AA	n/a	n/a	MSQ1324

The QC reported here (Summa M413) applies to the following samples: **Method:** TO-15

Batch CP1674 cleaned 06/27/15: MC40134-2(M413)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-34-3	1,1-Dichloroethane	ND	0.20	0.078	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.14	ppbv		ND	0.79	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.13	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.093	ppbv		ND	0.79	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.095	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.18	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.16	ppbv		ND	1.1	ug/m3
127-18-4	Tetrachloroethylene	ND	0.20	0.16	ppbv		ND	1.4	ug/m3
79-01-6	Trichloroethylene	ND	0.20	0.15	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	0.13	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	95%	50-129%

Summa Cleaning Certification

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSJ1614-SCC	J32268.D	1	07/15/15	PN	n/a	n/a	MSJ1614

The QC reported here (Summa M115) applies to the following samples: **Method:** TO-15

Batch CP1678 cleaned 07/09/15: MC40134-1(M115)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-34-3	1,1-Dichloroethane	ND	0.20	0.078	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.14	ppbv		ND	0.79	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.13	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.093	ppbv		ND	0.79	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.095	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.18	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.16	ppbv		ND	1.1	ug/m3
127-18-4	Tetrachloroethylene	ND	0.20	0.16	ppbv		ND	1.4	ug/m3
79-01-6	Trichloroethylene	ND	0.20	0.15	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	0.13	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	93%	50-129%

Instrument Performance Check (BFB)

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample:	MSJ1614-BFB	**Injection Date:**	07/14/15
Lab File ID:	J32254.D	**Injection Time:**	10:19
Instrument ID:	GCMSJ		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	14188	23.3		Pass
75	30.0 - 66.0% of mass 95	34104	55.9		Pass
95	Base peak, 100% relative abundance	60968	100.0		Pass
96	5.0 - 9.0% of mass 95	4228	6.93		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	49320	80.9		Pass
175	4.0 - 9.0% of mass 174	3822	6.27	(7.75) [a]	Pass
176	93.0 - 101.0% of mass 174	49016	80.4	(99.4) [a]	Pass
177	5.0 - 9.0% of mass 176	3103	5.09	(6.33) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSJ1614-IC1614	J32256.D	07/14/15	13:29	03:10	Initial cal 0.2
MSJ1614-IC1614	J32257.D	07/14/15	14:54	04:35	Initial cal 0.5
MSJ1614-IC1614	J32259.D	07/14/15	16:41	06:22	Initial cal 40
MSJ1614-IC1614	J32260.D	07/14/15	17:34	07:15	Initial cal 30
MSJ1614-IC1614	J32261.D	07/14/15	18:26	08:07	Initial cal 20
MSJ1614-ICC1614	J32262.D	07/14/15	19:19	09:00	Initial cal 10
MSJ1614-IC1614	J32263.D	07/14/15	20:13	09:54	Initial cal 5
MSJ1614-IC1614	J32264.D	07/14/15	21:07	10:48	Initial cal 2

Instrument Performance Check (BFB)

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample:	MSJ1614-BFB	**Injection Date:**	07/14/15
Lab File ID:	J32265.D	**Injection Time:**	22:00
Instrument ID:	GCMSJ		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	36952	20.6		Pass
75	30.0 - 66.0% of mass 95	95376	53.1		Pass
95	Base peak, 100% relative abundance	179520	100.0		Pass
96	5.0 - 9.0% of mass 95	12202	6.80		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	161536	90.0		Pass
175	4.0 - 9.0% of mass 174	12255	6.83	(7.59) [a]	Pass
176	93.0 - 101.0% of mass 174	158592	88.3	(98.2) [a]	Pass
177	5.0 - 9.0% of mass 176	10943	6.10	(6.90) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSJ1614-CC1614	J32265B.D	07/14/15	22:00	00:00	Continuing cal 10
MSJ1614-ICV1614	J32265A.D	07/14/15	22:00	00:00	Initial cal verification 10
MSJ1614-BS	J32265C.D	07/14/15	22:00	00:00	Blank Spike
MSJ1614-MB	J32267.D	07/14/15	23:53	01:53	Method Blank
MSJ1614-SCC	J32268.D	07/15/15	10:20	12:20	Summa Cleaning Certification
MSJ1614-SCC	J32270.D	07/15/15	12:57	14:57	Summa Cleaning Certification
MC39980-1	J32273.D	07/15/15	15:40	17:40	(used for QC only; not part of job MC40134)
ZZZZZZ	J32274.D	07/15/15	16:34	18:34	(unrelated sample)
MC39980-1DUP	J32275.D	07/15/15	17:29	19:29	Duplicate
ZZZZZZ	J32276.D	07/15/15	18:24	20:24	(unrelated sample)
ZZZZZZ	J32278.D	07/15/15	20:06	22:06	(unrelated sample)
ZZZZZZ	J32279.D	07/15/15	20:55	22:55	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample:	MSQ1321-BFB	**Injection Date:**	06/30/15
Lab File ID:	Q30474.D	**Injection Time:**	20:15
Instrument ID:	GCMSQ		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	53421	16.1		Pass
75	30.0 - 66.0% of mass 95	145608	44.0		Pass
95	Base peak, 100% relative abundance	331179	100.0		Pass
96	5.0 - 9.0% of mass 95	21320	6.44		Pass
173	Less than 2.0% of mass 174	824	0.25	(0.29) [a]	Pass
174	50.0 - 120.0% of mass 95	284736	86.0		Pass
175	4.0 - 9.0% of mass 174	20824	6.29	(7.31) [a]	Pass
176	93.0 - 101.0% of mass 174	278805	84.2	(97.9) [a]	Pass
177	5.0 - 9.0% of mass 176	18058	5.45	(6.48) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSQ1321-IC1321	Q30475.D	06/30/15	21:04	00:49	Initial cal 0.2
MSQ1321-IC1321	Q30476.D	06/30/15	21:53	01:38	Initial cal 0.5
MSQ1321-IC1321	Q30477.D	06/30/15	22:41	02:26	Initial cal 2
MSQ1321-IC1321	Q30478.D	06/30/15	23:29	03:14	Initial cal 5
MSQ1321-ICC1321	Q30479.D	07/01/15	00:17	04:02	Initial cal 10
MSQ1321-IC1321	Q30480.D	07/01/15	01:05	04:50	Initial cal 20
MSQ1321-IC1321	Q30481.D	07/01/15	01:52	05:37	Initial cal 30
MSQ1321-IC1321	Q30482.D	07/01/15	02:40	06:25	Initial cal 40

Instrument Performance Check (BFB)

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample:	MSQ1322-BFB	**Injection Date:**	07/01/15
Lab File ID:	Q30484.D	**Injection Time:**	10:19
Instrument ID:	GCMSQ		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	58136	16.1		Pass
75	30.0 - 66.0% of mass 95	159744	44.3		Pass
95	Base peak, 100% relative abundance	360576	100.0		Pass
96	5.0 - 9.0% of mass 95	24112	6.69		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	314944	87.3		Pass
175	4.0 - 9.0% of mass 174	22808	6.33	(7.24) [a]	Pass
176	93.0 - 101.0% of mass 174	304640	84.5	(96.7) [a]	Pass
177	5.0 - 9.0% of mass 176	19416	5.38	(6.37) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSQ1322-ICV1321	Q30484A.D	07/01/15	10:19	00:00	Initial cal verification 10
MSQ1322-CC1321	Q30484.D	07/01/15	10:19	00:00	Continuing cal 10
MSQ1322-BS	Q30484B.D	07/01/15	10:19	00:00	Blank Spike
MSQ1322-MB	Q30486.D	07/01/15	12:58	02:39	Method Blank
MSQ1322-SCC	Q30486A.D	07/01/15	12:58	02:39	Summa Cleaning Certification
ZZZZZZ	Q30487.D	07/01/15	14:03	03:44	(unrelated sample)
ZZZZZZ	Q30489.D	07/01/15	16:21	06:02	(unrelated sample)
MSQ1322-SCC	Q30490.D	07/01/15	17:34	07:15	Summa Cleaning Certification
MC39640-1	Q30491.D	07/01/15	18:29	08:10	(used for QC only; not part of job MC40134)
MC39640-1DUP	Q30492.D	07/01/15	20:03	09:44	Duplicate
ZZZZZZ	Q30494.D	07/01/15	21:41	11:22	(unrelated sample)
ZZZZZZ	Q30495.D	07/01/15	22:30	12:11	(unrelated sample)
ZZZZZZ	Q30496.D	07/01/15	23:18	12:59	(unrelated sample)
ZZZZZZ	Q30497.D	07/02/15	00:07	13:48	(unrelated sample)
ZZZZZZ	Q30498.D	07/02/15	00:55	14:36	(unrelated sample)
ZZZZZZ	Q30499.D	07/02/15	01:45	15:26	(unrelated sample)
ZZZZZZ	Q30500.D	07/02/15	02:33	16:14	(unrelated sample)
ZZZZZZ	Q30501.D	07/02/15	03:22	17:03	(unrelated sample)
ZZZZZZ	Q30506.D	07/02/15	07:50	21:31	(unrelated sample)
ZZZZZZ	Q30507.D	07/02/15	08:38	22:19	(unrelated sample)
ZZZZZZ	Q30508.D	07/02/15	09:26	23:07	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSQ1324-BFB
Lab File ID: Q30525.D
Instrument ID: GCMSQ
Injection Date: 07/05/15
Injection Time: 08:06

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	51984	17.3		Pass
75	30.0 - 66.0% of mass 95	138496	46.0		Pass
95	Base peak, 100% relative abundance	301248	100.0		Pass
96	5.0 - 9.0% of mass 95	20536	6.82		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	256064	85.0		Pass
175	4.0 - 9.0% of mass 174	19400	6.44	(7.58) [a]	Pass
176	93.0 - 101.0% of mass 174	249664	82.9	(97.5) [a]	Pass
177	5.0 - 9.0% of mass 176	16368	5.43	(6.56) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSQ1324-BS	Q30525A.D	07/05/15	08:06	00:00	Blank Spike
MSQ1324-CC1321	Q30525.D	07/05/15	08:06	00:00	Continuing cal 10
MSQ1324-SCC	Q30526.D	07/05/15	09:43	01:37	Summa Cleaning Certification
MSQ1324-SCC	Q30527A.D	07/05/15	10:54	02:48	Summa Cleaning Certification
MSQ1324-MB	Q30527.D	07/05/15	10:54	02:48	Method Blank
ZZZZZZ	Q30528.D	07/05/15	11:59	03:53	(unrelated sample)
ZZZZZZ	Q30529.D	07/05/15	12:48	04:42	(unrelated sample)
ZZZZZZ	Q30530.D	07/05/15	13:37	05:31	(unrelated sample)
ZZZZZZ	Q30531.D	07/05/15	14:32	06:26	(unrelated sample)
ZZZZZZ	Q30532.D	07/05/15	15:31	07:25	(unrelated sample)
ZZZZZZ	Q30533.D	07/05/15	16:20	08:14	(unrelated sample)
ZZZZZZ	Q30534.D	07/05/15	17:10	09:04	(unrelated sample)
ZZZZZZ	Q30535.D	07/05/15	17:59	09:53	(unrelated sample)
ZZZZZZ	Q30536.D	07/05/15	18:48	10:42	(unrelated sample)
ZZZZZZ	Q30537.D	07/05/15	19:37	11:31	(unrelated sample)
ZZZZZZ	Q30539.D	07/05/15	21:15	13:09	(unrelated sample)
ZZZZZZ	Q30540.D	07/05/15	22:03	13:57	(unrelated sample)
ZZZZZZ	Q30541.D	07/05/15	22:52	14:46	(unrelated sample)
ZZZZZZ	Q30542.D	07/05/15	23:40	15:34	(unrelated sample)
MC39810-1	Q30543.D	07/06/15	00:28	16:22	(used for QC only; not part of job MC40134)
MC39810-1DUP	Q30544.D	07/06/15	01:16	17:10	Duplicate
ZZZZZZ	Q30546.D	07/06/15	02:53	18:47	(unrelated sample)
ZZZZZZ	Q30547.D	07/06/15	03:41	19:35	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSQ1338-BFB
Lab File ID: Q30799A.D
Instrument ID: GCMSQ
Injection Date: 07/24/15
Injection Time: 18:08

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	29728	19.1		Pass
75	30.0 - 66.0% of mass 95	79408	51.0		Pass
95	Base peak, 100% relative abundance	155712	100.0		Pass
96	5.0 - 9.0% of mass 95	9986	6.41		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	140032	89.9		Pass
175	4.0 - 9.0% of mass 174	9814	6.30	(7.01) [a]	Pass
176	93.0 - 101.0% of mass 174	136640	87.8	(97.6) [a]	Pass
177	5.0 - 9.0% of mass 176	8753	5.62	(6.41) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSQ1338-ICC1338	Q30799.D	07/24/15	18:08	00:00	Initial cal 10
MSQ1338-IC1338	Q30800.D	07/24/15	19:54	01:46	Initial cal 40
MSQ1338-IC1338	Q30801.D	07/24/15	20:43	02:35	Initial cal 30
MSQ1338-IC1338	Q30802.D	07/24/15	21:32	03:24	Initial cal 20
MSQ1338-IC1338	Q30803.D	07/24/15	22:21	04:13	Initial cal 5
MSQ1338-IC1338	Q30804.D	07/24/15	23:09	05:01	Initial cal 2
MSQ1338-IC1338	Q30805.D	07/24/15	23:58	05:50	Initial cal 0.5
MSQ1338-IC1338	Q30806.D	07/25/15	00:46	06:38	Initial cal 0.2
MSQ1338-BS	Q30808A.D	07/25/15	02:22	08:14	Blank Spike
MSQ1338-ICV1338	Q30808.D	07/25/15	02:22	08:14	Initial cal verification 10
MSQ1338-MB	Q30810.D	07/25/15	03:59	09:51	Method Blank
ZZZZZZ	Q30811.D	07/25/15	04:47	10:39	(unrelated sample)
ZZZZZZ	Q30812.D	07/25/15	05:35	11:27	(unrelated sample)
ZZZZZZ	Q30813.D	07/25/15	06:23	12:15	(unrelated sample)
ZZZZZZ	Q30814.D	07/25/15	07:12	13:04	(unrelated sample)
MC40102-5	Q30815.D	07/25/15	08:00	13:52	(used for QC only; not part of job MC40134)
MC40102-5DUP	Q30816.D	07/25/15	08:48	14:40	Duplicate

Instrument Performance Check (BFB)

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample:	MSQ1339-BFB	**Injection Date:**	07/27/15
Lab File ID:	Q30817.D	**Injection Time:**	10:56
Instrument ID:	GCMSQ		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	33472	21.4		Pass
75	30.0 - 66.0% of mass 95	81704	52.3		Pass
95	Base peak, 100% relative abundance	156352	100.0		Pass
96	5.0 - 9.0% of mass 95	10447	6.68		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	132352	84.7		Pass
175	4.0 - 9.0% of mass 174	9509	6.08	(7.18) [a]	Pass
176	93.0 - 101.0% of mass 174	127088	81.3	(96.0) [a]	Pass
177	5.0 - 9.0% of mass 176	8415	5.38	(6.62) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSQ1339-CC1338	Q30817A.D	07/27/15	10:56	00:00	Continuing cal 10
MSQ1339-BS	Q30817B.D	07/27/15	10:56	00:00	Blank Spike
MSQ1339-SCC	Q30819A.D	07/27/15	12:49	01:53	Summa Cleaning Certification
MSQ1339-MB	Q30819.D	07/27/15	12:49	01:53	Method Blank
MC40134-1	Q30820.D	07/27/15	13:41	02:45	045163-29KNOW-1
MC40134-2	Q30821.D	07/27/15	14:33	03:37	045163-29KNOW-B
MC40134-2DUP	Q30822.D	07/27/15	15:25	04:29	Duplicate
ZZZZZZ	Q30823.D	07/27/15	16:37	05:41	(unrelated sample)
ZZZZZZ	Q30824.D	07/27/15	17:32	06:36	(unrelated sample)
ZZZZZZ	Q30825.D	07/27/15	18:24	07:28	(unrelated sample)
ZZZZZZ	Q30826.D	07/27/15	19:15	08:19	(unrelated sample)
ZZZZZZ	Q30827.D	07/27/15	20:06	09:10	(unrelated sample)
ZZZZZZ	Q30830.D	07/27/15	22:35	11:39	(unrelated sample)
ZZZZZZ	Q30831.D	07/27/15	23:25	12:29	(unrelated sample)
ZZZZZZ	Q30832.D	07/28/15	08:48	21:52	(unrelated sample)
ZZZZZZ	Q30833.D	07/28/15	09:39	22:43	(unrelated sample)

Volatile Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Check Std:	MSJ1614-CC1614	**Injection Date:**	07/14/15
Lab File ID:	J32265B.D	**Injection Time:**	22:00
Instrument ID:	GCMSJ	**Method:**	TO-15

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Check Std	319711	9.68	1310780	12.53	809341	20.14
Upper Limit [a]	447595	10.01	1835092	12.86	1133077	20.47
Lower Limit [b]	191827	9.35	786468	12.20	485605	19.81

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
MSJ1614-MB	308295	9.68	1372108	12.53	708503	20.14
MSJ1614-SCC	350268	9.67	1594095	12.53	817486	20.14
MSJ1614-SCC	267915	9.69	1183071	12.53	624202	20.14
MC39980-1	276982	9.69	1190470	12.53	650388	20.14
ZZZZZZ	433124	9.67	1955002[c]	12.53	943197	20.14
MC39980-1DUP	348087	9.67	1512719	12.53	743498	20.14
ZZZZZZ	370450	9.67	1594993	12.53	776958	20.13
ZZZZZZ	292462	9.67	1190845	12.53	626947	20.13
ZZZZZZ	371690	9.67	1682484	12.53	824422	20.14

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = + 40% of check standard area; Retention time + 0.33 minutes.
(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.
(c) Outside control limits due to possible matrix interference. Confirmed by reanalysis.

Volatile Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Check Std:	MSQ1324-CC1321	**Injection Date:**	07/05/15
Lab File ID:	Q30525.D	**Injection Time:**	08:06
Instrument ID:	GCMSQ	**Method:**	TO-15

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Check Std	583062	9.15	2721582	11.81	1268330	18.88
Upper Limit [a]	816287	9.48	3810215	12.14	1775662	19.21
Lower Limit [b]	349837	8.82	1632949	11.48	760998	18.55

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
MSQ1324-BS	583062	9.15	2721582	11.81	1268330	18.88
MSQ1324-SCC	620482	9.16	2640060	11.82	1221009	18.88
MSQ1324-SCC	616809	9.15	2796730	11.81	1230760	18.87
MSQ1324-MB	616809	9.15	2796730	11.81	1230760	18.87
ZZZZZZ	566313	9.16	2383622	11.81	1120791	18.87
ZZZZZZ	625642	9.16	2687232	11.82	1191114	18.88
ZZZZZZ	560771	9.15	2309300	11.82	1040156	18.88
ZZZZZZ	583052	9.16	2337536	11.82	1081861	18.87
ZZZZZZ	553851	9.15	2309697	11.81	1068864	18.87
ZZZZZZ	609894	9.15	2641844	11.82	1232066	18.88
ZZZZZZ	599586	9.16	2553058	11.82	1193802	18.88
ZZZZZZ	571221	9.16	2297510	11.82	1014304	18.88
ZZZZZZ	600062	9.16	2720427	11.82	1157957	18.88
ZZZZZZ	566870	9.16	2281919	11.82	1074196	18.88
ZZZZZZ	586425	9.16	2690960	11.82	1163690	18.88
ZZZZZZ	605688	9.16	2730954	11.82	1168430	18.88
ZZZZZZ	581820	9.16	2549262	11.82	1146490	18.87
ZZZZZZ	577401	9.16	2559063	11.82	1160157	18.87
MC39810-1	559851	9.16	2634759	11.82	1166414	18.88
MC39810-1DUP	535994	9.16	2428778	11.82	1094609	18.88
ZZZZZZ	566807	9.16	2396229	11.81	1099990	18.87
ZZZZZZ	579825	9.16	2466102	11.82	1110589	18.87

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = + 40% of check standard area; Retention time + 0.33 minutes.
(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Volatile Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Check Std:	MSQ1339-CC1338	**Injection Date:**	07/27/15
Lab File ID:	Q30817A.D	**Injection Time:**	10:56
Instrument ID:	GCMSQ	**Method:**	TO-15

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Check Std	293493	9.15	1337486	11.80	676708	18.86
Upper Limit [a]	410890	9.48	1872480	12.13	947391	19.19
Lower Limit [b]	176096	8.82	802492	11.47	406025	18.53

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
MSQ1339-BS	293493	9.15	1337486	11.80	676708	18.86
MSQ1339-MB	301379	9.15	1321154	11.80	657681	18.86
MSQ1339-SCC	301379	9.15	1321154	11.80	657681	18.86
MC40134-1	311919	9.15	1473455	11.80	691542	18.86
MC40134-2	269955	9.15	1225872	11.81	640278	18.86
MC40134-2DUP	252562	9.15	1196904	11.80	588773	18.86
ZZZZZZ	264373	9.15	1263018	11.80	609757	18.86
ZZZZZZ	270924	9.15	1281452	11.80	623432	18.86
ZZZZZZ	303725	9.15	1423013	11.81	708687	18.86
ZZZZZZ	276190	9.15	1304994	11.80	622152	18.86
ZZZZZZ	278693	9.16	1208370	11.82	583215	18.86
ZZZZZZ	302155	9.15	1429568	11.80	683809	18.86
ZZZZZZ	300220	9.15	1443643	11.80	691369	18.86
ZZZZZZ	298351	9.15	1423075	11.80	682667	18.86
ZZZZZZ	257654	9.15	1149923	11.81	582364	18.86

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = + 40% of check standard area; Retention time + 0.33 minutes.
(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSJ1614-IC1614	J32256.D	07/14/15 13:29	PN	0.2	GCMSJ	TO-15	Reporting this level
MSJ1614-IC1614	J32257.D	07/14/15 14:54	PN	0.5	GCMSJ	TO-15	
MSJ1614-IC1614	J32259.D	07/14/15 16:41	PN	40	GCMSJ	TO-15	
MSJ1614-IC1614	J32260.D	07/14/15 17:34	PN	30	GCMSJ	TO-15	
MSJ1614-IC1614	J32261.D	07/14/15 18:26	PN	20	GCMSJ	TO-15	
MSJ1614-ICC1614	J32262.D	07/14/15 19:19	PN	10	GCMSJ	TO-15	
MSJ1614-IC1614	J32263.D	07/14/15 20:13	PN	5	GCMSJ	TO-15	
MSJ1614-IC1614	J32264.D	07/14/15 21:07	PN	2	GCMSJ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.90	9.66	0.611	ok	0.608	0.548-0.668
Acrolein	5.73	9.66	0.593	ok	0.593	0.533-0.653
Acrylonitrile	6.39	9.66	0.661	ok	0.660	0.600-0.720
1,3-Butadiene	4.76	9.66	0.493	ok	0.493	0.433-0.553
Benzene	11.98	12.52	0.957	ok	0.956	0.896-1.016
Bromodichloromethane	13.59	12.52	1.085	ok	1.084	1.024-1.144
Bromomethane	5.05	9.66	0.523	ok	0.523	0.463-0.583
Bromoethene	5.62	9.66	0.582	ok	0.581	0.521-0.641
Benzyl Chloride	23.90	20.14	1.187	ok	1.187	1.127-1.247
Carbon disulfide	7.30	9.66	0.756	ok	0.755	0.695-0.815
Chlorobenzene	20.21	20.14	1.003	ok	1.004	0.944-1.064
Chloroethane	5.23	9.66	0.541	ok	0.541	0.481-0.601
Chloroform	9.85	9.66	1.020	ok	1.019	0.959-1.079
Chloromethane	4.38	9.66	0.453	ok	0.454	0.394-0.514
3-Chloropropene	7.07	9.66	0.732	ok	0.731	0.671-0.791
Carbon tetrachloride	12.21	9.66	1.264	ok	1.263	1.203-1.323
Cyclohexane	12.40	12.52	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	8.33	9.66	0.862	ok	0.862	0.802-0.922
1,1-Dichloroethylene	6.79	9.66	0.703	ok	0.703	0.643-0.763
1,2-Dibromoethane	18.11	20.14	0.899	ok	0.900	0.840-0.960
1,2-Dichloroethane	10.90	9.66	1.128	ok	1.128	1.068-1.188
1,2-Dichloropropane	13.27	12.52	1.060	ok	1.059	0.999-1.119
1,3-Dichloropropane	16.91	12.52	1.351	ok	1.350	1.290-1.410
Dichlorodifluoromethane	4.20	9.66	0.435	ok	0.435	0.375-0.495
Dibromochloromethane	17.64	20.14	0.876	ok	0.876	0.816-0.936
trans-1,2-Dichloroethylene	8.07	9.66	0.835	ok	0.835	0.775-0.895
cis-1,2-Dichloroethylene	9.43	9.66	0.976	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	15.12	12.52	1.208	ok	1.207	1.147-1.267
Ethanol	5.36	9.66	0.555	ok	0.553	0.493-0.613
Ethylbenzene	20.89	20.14	1.037	ok	1.038	0.978-1.098
Ethyl Acetate	9.78	9.66	1.012	ok	1.009	0.949-1.069
Freon 113	7.24	9.66	0.749	ok	0.749	0.689-0.809
Freon 114	4.48	9.66	0.464	ok	0.464	0.404-0.524
Heptane	14.16	12.52	1.131	ok	1.130	1.070-1.190
Hexane	9.73	9.66	1.007	ok	1.006	0.946-1.066
2-Hexanone	17.41	20.14	0.864	ok	0.863	0.803-0.923
Isopropyl Alcohol	6.16	9.66	0.638	ok	0.635	0.575-0.695
Methylene chloride	6.92	9.66	0.716	ok	0.716	0.656-0.776
Methyl ethyl ketone	8.89	9.66	0.920	ok	0.916	0.856-0.976
Methyl Isobutyl Ketone	15.24	12.52	1.217	ok	1.214	1.154-1.274

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSJ1614-IC1614	J32256.D	07/14/15 13:29	PN	0.2	GCMSJ	TO-15	Reporting this level
MSJ1614-IC1614	J32257.D	07/14/15 14:54	PN	0.5	GCMSJ	TO-15	
MSJ1614-IC1614	J32259.D	07/14/15 16:41	PN	40	GCMSJ	TO-15	
MSJ1614-IC1614	J32260.D	07/14/15 17:34	PN	30	GCMSJ	TO-15	
MSJ1614-IC1614	J32261.D	07/14/15 18:26	PN	20	GCMSJ	TO-15	
MSJ1614-ICC1614	J32262.D	07/14/15 19:19	PN	10	GCMSJ	TO-15	
MSJ1614-IC1614	J32263.D	07/14/15 20:13	PN	5	GCMSJ	TO-15	
MSJ1614-IC1614	J32264.D	07/14/15 21:07	PN	2	GCMSJ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Methyl Tert Butyl Ether	8.45	9.66	0.875	ok	0.871	0.811-0.931
Methylmethacrylate	14.02	12.52	1.120	ok	1.118	1.058-1.178
Nonane	22.45	20.14	1.115	ok	1.115	1.055-1.175
Pentane	6.46	9.66	0.669	ok	0.668	0.608-0.728
Propylene	4.13	9.66	0.428	ok	0.428	0.368-0.488
Styrene	21.85	20.14	1.085	ok	1.085	1.025-1.145
1,1,1-Trichloroethane	11.28	9.66	1.168	ok	1.167	1.107-1.227
1,1,1,2-Tetrachloroethane	20.19	20.14	1.002	ok	1.003	0.943-1.063
2,2,4-Trimethylpentane	13.71	12.52	1.095	ok	1.095	1.035-1.155
Tertiary Butyl Alcohol	6.89	9.66	0.713	ok	0.708	0.648-0.768
Tetrachloroethylene	18.99	20.14	0.943	ok	0.943	0.883-1.003
Tetrahydrofuran	10.50	9.66	1.087	ok	1.081	1.021-1.141
Toluene	16.87	12.52	1.347	ok	1.346	1.286-1.406
Trichloroethylene	13.66	12.52	1.091	ok	1.090	1.030-1.150
Trichlorofluoromethane	6.07	9.66	0.628	ok	0.628	0.568-0.688
Vinyl chloride	4.60	9.66	0.476	ok	0.478	0.418-0.538
Vinyl Acetate	8.52	9.66	0.882	ok	0.881	0.821-0.941
m,p-Xylene	21.23	20.14	1.054	ok	1.054	0.994-1.114

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.66	ok	9.67	9.34-10.00	266962	ok	323660	194196-453124
1,4-Difluorobenzene	12.52	ok	12.53	12.20-12.86	973619	ok	1356455	813873-1899037
Chlorobenzene-D5	20.14	ok	20.14	19.81-20.47	534734	ok	753952	452371-1055533

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSJ1614-IC1614	J32256.D	07/14/15 13:29	PN	0.2	GCMSJ	TO-15	
MSJ1614-IC1614	J32257.D	07/14/15 14:54	PN	0.5	GCMSJ	TO-15	Reporting this level
MSJ1614-IC1614	J32259.D	07/14/15 16:41	PN	40	GCMSJ	TO-15	
MSJ1614-IC1614	J32260.D	07/14/15 17:34	PN	30	GCMSJ	TO-15	
MSJ1614-IC1614	J32261.D	07/14/15 18:26	PN	20	GCMSJ	TO-15	
MSJ1614-ICC1614	J32262.D	07/14/15 19:19	PN	10	GCMSJ	TO-15	
MSJ1614-IC1614	J32263.D	07/14/15 20:13	PN	5	GCMSJ	TO-15	
MSJ1614-IC1614	J32264.D	07/14/15 21:07	PN	2	GCMSJ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.90	9.67	0.610	ok	0.608	0.548-0.668
Acrolein	5.73	9.67	0.593	ok	0.593	0.533-0.653
Acrylonitrile	6.38	9.67	0.660	ok	0.660	0.600-0.720
1,3-Butadiene	4.77	9.67	0.493	ok	0.493	0.433-0.553
Benzene	11.98	12.53	0.956	ok	0.956	0.896-1.016
Bromodichloromethane	13.59	12.53	1.085	ok	1.084	1.024-1.144
Bromomethane	5.06	9.67	0.523	ok	0.523	0.463-0.583
Bromoethene	5.62	9.67	0.581	ok	0.581	0.521-0.641
Benzyl Chloride	23.90	20.14	1.187	ok	1.187	1.127-1.247
Carbon disulfide	7.31	9.67	0.756	ok	0.755	0.695-0.815
Chlorobenzene	20.22	20.14	1.004	ok	1.004	0.944-1.064
Chloroethane	5.25	9.67	0.543	ok	0.541	0.481-0.601
Chloroform	9.85	9.67	1.019	ok	1.019	0.959-1.079
Chloromethane	4.39	9.67	0.454	ok	0.454	0.394-0.514
3-Chloropropene	7.08	9.67	0.732	ok	0.731	0.671-0.791
Carbon tetrachloride	12.22	9.67	1.264	ok	1.263	1.203-1.323
Cyclohexane	12.41	12.53	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	8.34	9.67	0.862	ok	0.862	0.802-0.922
1,1-Dichloroethylene	6.80	9.67	0.703	ok	0.703	0.643-0.763
1,2-Dibromoethane	18.11	20.14	0.899	ok	0.900	0.840-0.960
1,2-Dichloroethane	10.91	9.67	1.128	ok	1.128	1.068-1.188
1,2-Dichloropropane	13.27	12.53	1.059	ok	1.059	0.999-1.119
1,3-Dichloropropane	16.91	12.53	1.350	ok	1.350	1.290-1.410
Dichlorodifluoromethane	4.21	9.67	0.435	ok	0.435	0.375-0.495
Dibromochloromethane	17.64	20.14	0.876	ok	0.876	0.816-0.936
trans-1,2-Dichloroethylene	8.08	9.67	0.836	ok	0.835	0.775-0.895
cis-1,2-Dichloroethylene	9.45	9.67	0.977	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	15.13	12.53	1.208	ok	1.207	1.147-1.267
Ethanol	5.36	9.67	0.554	ok	0.553	0.493-0.613
Ethylbenzene	20.90	20.14	1.038	ok	1.038	0.978-1.098
Ethyl Acetate	9.77	9.67	1.010	ok	1.009	0.949-1.069
Freon 113	7.25	9.67	0.750	ok	0.749	0.689-0.809
Freon 114	4.49	9.67	0.464	ok	0.464	0.404-0.524
Heptane	14.16	12.53	1.130	ok	1.130	1.070-1.190
Hexane	9.73	9.67	1.006	ok	1.006	0.946-1.066
2-Hexanone	17.41	20.14	0.864	ok	0.863	0.803-0.923
Isopropyl Alcohol	6.16	9.67	0.637	ok	0.635	0.575-0.695
Methylene chloride	6.93	9.67	0.717	ok	0.716	0.656-0.776
Methyl ethyl ketone	8.88	9.67	0.918	ok	0.916	0.856-0.976
Methyl Isobutyl Ketone	15.23	12.53	1.215	ok	1.214	1.154-1.274

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSJ1614-IC1614	J32256.D	07/14/15 13:29	PN	0.2	GCMSJ	TO-15	
MSJ1614-IC1614	J32257.D	07/14/15 14:54	PN	0.5	GCMSJ	TO-15	Reporting this level
MSJ1614-IC1614	J32259.D	07/14/15 16:41	PN	40	GCMSJ	TO-15	
MSJ1614-IC1614	J32260.D	07/14/15 17:34	PN	30	GCMSJ	TO-15	
MSJ1614-IC1614	J32261.D	07/14/15 18:26	PN	20	GCMSJ	TO-15	
MSJ1614-ICC1614	J32262.D	07/14/15 19:19	PN	10	GCMSJ	TO-15	
MSJ1614-IC1614	J32263.D	07/14/15 20:13	PN	5	GCMSJ	TO-15	
MSJ1614-IC1614	J32264.D	07/14/15 21:07	PN	2	GCMSJ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Methyl Tert Butyl Ether	8.45	9.67	0.874	ok	0.871	0.811-0.931
Methylmethacrylate	14.02	12.53	1.119	ok	1.118	1.058-1.178
Nonane	22.45	20.14	1.115	ok	1.115	1.055-1.175
Pentane	6.47	9.67	0.669	ok	0.668	0.608-0.728
Propylene	4.14	9.67	0.428	ok	0.428	0.368-0.488
Styrene	21.85	20.14	1.085	ok	1.085	1.025-1.145
1,1,1-Trichloroethane	11.29	9.67	1.168	ok	1.167	1.107-1.227
1,1,1,2-Tetrachloroethane	20.19	20.14	1.002	ok	1.003	0.943-1.063
2,2,4-Trimethylpentane	13.71	12.53	1.094	ok	1.095	1.035-1.155
Tertiary Butyl Alcohol	6.88	9.67	0.711	ok	0.708	0.648-0.768
Tetrachloroethylene	18.99	20.14	0.943	ok	0.943	0.883-1.003
Tetrahydrofuran	10.48	9.67	1.084	ok	1.081	1.021-1.141
Toluene	16.87	12.53	1.346	ok	1.346	1.286-1.406
Trichloroethylene	13.66	12.53	1.090	ok	1.090	1.030-1.150
Trichlorofluoromethane	6.07	9.67	0.628	ok	0.628	0.568-0.688
Vinyl chloride	4.62	9.67	0.478	ok	0.478	0.418-0.538
Vinyl Acetate	8.52	9.67	0.881	ok	0.881	0.821-0.941
m,p-Xylene	21.23	20.14	1.054	ok	1.054	0.994-1.114

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.67	ok	9.67	9.34-10.00	265216	ok	323660	194196-453124
1,4-Difluorobenzene	12.53	ok	12.53	12.20-12.86	1161993	ok	1356455	813873-1899037
Chlorobenzene-D5	20.14	ok	20.14	19.81-20.47	603760	ok	753952	452371-1055533

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSJ1614-IC1614	J32256.D	07/14/15 13:29	PN	0.2	GCMSJ	TO-15	
MSJ1614-IC1614	J32257.D	07/14/15 14:54	PN	0.5	GCMSJ	TO-15	
MSJ1614-IC1614	J32259.D	07/14/15 16:41	PN	40	GCMSJ	TO-15	Reporting this level
MSJ1614-IC1614	J32260.D	07/14/15 17:34	PN	30	GCMSJ	TO-15	
MSJ1614-IC1614	J32261.D	07/14/15 18:26	PN	20	GCMSJ	TO-15	
MSJ1614-ICC1614	J32262.D	07/14/15 19:19	PN	10	GCMSJ	TO-15	
MSJ1614-IC1614	J32263.D	07/14/15 20:13	PN	5	GCMSJ	TO-15	
MSJ1614-IC1614	J32264.D	07/14/15 21:07	PN	2	GCMSJ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.84	9.63	0.606	ok	0.608	0.548-0.668
Acrolein	5.70	9.63	0.592	ok	0.593	0.533-0.653
Acrylonitrile	6.36	9.63	0.660	ok	0.660	0.600-0.720
1,3-Butadiene	4.75	9.63	0.493	ok	0.493	0.433-0.553
Benzene	11.95	12.50	0.956	ok	0.956	0.896-1.016
Bromodichloromethane	13.56	12.50	1.085	ok	1.084	1.024-1.144
Bromomethane	5.04	9.63	0.523	ok	0.523	0.463-0.583
Bromoethene	5.59	9.63	0.580	ok	0.581	0.521-0.641
Benzyl Chloride	23.91	20.13	1.188	ok	1.187	1.127-1.247
Carbon disulfide	7.27	9.63	0.755	ok	0.755	0.695-0.815
Chlorobenzene	20.22	20.13	1.004	ok	1.004	0.944-1.064
Chloroethane	5.22	9.63	0.542	ok	0.541	0.481-0.601
Chloroform	9.81	9.63	1.019	ok	1.019	0.959-1.079
Chloromethane	4.38	9.63	0.455	ok	0.454	0.394-0.514
3-Chloropropene	7.03	9.63	0.730	ok	0.731	0.671-0.791
Carbon tetrachloride	12.18	9.63	1.265	ok	1.263	1.203-1.323
Cyclohexane	12.38	12.50	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	8.29	9.63	0.861	ok	0.862	0.802-0.922
1,1-Dichloroethylene	6.76	9.63	0.702	ok	0.703	0.643-0.763
1,2-Dibromoethane	18.11	20.13	0.900	ok	0.900	0.840-0.960
1,2-Dichloroethane	10.87	9.63	1.129	ok	1.128	1.068-1.188
1,2-Dichloropropane	13.25	12.50	1.060	ok	1.059	0.999-1.119
1,3-Dichloropropane	16.90	12.50	1.352	ok	1.350	1.290-1.410
Dichlorodifluoromethane	4.21	9.63	0.437	ok	0.435	0.375-0.495
Dibromochloromethane	17.64	20.13	0.876	ok	0.876	0.816-0.936
trans-1,2-Dichloroethylene	8.04	9.63	0.835	ok	0.835	0.775-0.895
cis-1,2-Dichloroethylene	9.40	9.63	0.976	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	15.10	12.50	1.208	ok	1.207	1.147-1.267
Ethanol	5.32	9.63	0.552	ok	0.553	0.493-0.613
Ethylbenzene	20.89	20.13	1.038	ok	1.038	0.978-1.098
Ethyl Acetate	9.71	9.63	1.008	ok	1.009	0.949-1.069
Freon 113	7.20	9.63	0.748	ok	0.749	0.689-0.809
Freon 114	4.48	9.63	0.465	ok	0.464	0.404-0.524
Heptane	14.14	12.50	1.131	ok	1.130	1.070-1.190
Hexane	9.69	9.63	1.006	ok	1.006	0.946-1.066
2-Hexanone	17.37	20.13	0.863	ok	0.863	0.803-0.923
Isopropyl Alcohol	6.11	9.63	0.634	ok	0.635	0.575-0.695
Methylene chloride	6.89	9.63	0.715	ok	0.716	0.656-0.776
Methyl ethyl ketone	8.80	9.63	0.914	ok	0.916	0.856-0.976
Methyl Isobutyl Ketone	15.17	12.50	1.214	ok	1.214	1.154-1.274

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSJ1614-IC1614	J32256.D	07/14/15 13:29	PN	0.2	GCMSJ	TO-15	
MSJ1614-IC1614	J32257.D	07/14/15 14:54	PN	0.5	GCMSJ	TO-15	
MSJ1614-IC1614	J32259.D	07/14/15 16:41	PN	40	GCMSJ	TO-15	Reporting this level
MSJ1614-IC1614	J32260.D	07/14/15 17:34	PN	30	GCMSJ	TO-15	
MSJ1614-IC1614	J32261.D	07/14/15 18:26	PN	20	GCMSJ	TO-15	
MSJ1614-ICC1614	J32262.D	07/14/15 19:19	PN	10	GCMSJ	TO-15	
MSJ1614-IC1614	J32263.D	07/14/15 20:13	PN	5	GCMSJ	TO-15	
MSJ1614-IC1614	J32264.D	07/14/15 21:07	PN	2	GCMSJ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Methyl Tert Butyl Ether	8.37	9.63	0.869	ok	0.871	0.811-0.931
Methylmethacrylate	13.98	12.50	1.118	ok	1.118	1.058-1.178
Nonane	22.46	20.13	1.116	ok	1.115	1.055-1.175
Pentane	6.43	9.63	0.668	ok	0.668	0.608-0.728
Propylene	4.14	9.63	0.430	ok	0.428	0.368-0.488
Styrene	21.85	20.13	1.085	ok	1.085	1.025-1.145
1,1,1-Trichloroethane	11.25	9.63	1.168	ok	1.167	1.107-1.227
1,1,1,2-Tetrachloroethane	20.19	20.13	1.003	ok	1.003	0.943-1.063
2,2,4-Trimethylpentane	13.69	12.50	1.095	ok	1.095	1.035-1.155
Tertiary Butyl Alcohol	6.80	9.63	0.706	ok	0.708	0.648-0.768
Tetrachloroethylene	18.98	20.13	0.943	ok	0.943	0.883-1.003
Tetrahydrofuran	10.39	9.63	1.079	ok	1.081	1.021-1.141
Toluene	16.85	12.50	1.348	ok	1.346	1.286-1.406
Trichloroethylene	13.63	12.50	1.090	ok	1.090	1.030-1.150
Trichlorofluoromethane	6.04	9.63	0.627	ok	0.628	0.568-0.688
Vinyl chloride	4.61	9.63	0.479	ok	0.478	0.418-0.538
Vinyl Acetate	8.48	9.63	0.881	ok	0.881	0.821-0.941
m,p-Xylene	21.24	20.13	1.055	ok	1.054	0.994-1.114

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.63	ok	9.67	9.34-10.00	286271	ok	323660	194196-453124
1,4-Difluorobenzene	12.50	ok	12.53	12.20-12.86	1298200	ok	1356455	813873-1899037
Chlorobenzene-D5	20.13	ok	20.14	19.81-20.47	730377	ok	753952	452371-1055533

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSJ1614-IC1614	J32256.D	07/14/15 13:29	PN	0.2	GCMSJ	TO-15	
MSJ1614-IC1614	J32257.D	07/14/15 14:54	PN	0.5	GCMSJ	TO-15	
MSJ1614-IC1614	J32259.D	07/14/15 16:41	PN	40	GCMSJ	TO-15	
MSJ1614-IC1614	J32260.D	07/14/15 17:34	PN	30	GCMSJ	TO-15	Reporting this level
MSJ1614-IC1614	J32261.D	07/14/15 18:26	PN	20	GCMSJ	TO-15	
MSJ1614-ICC1614	J32262.D	07/14/15 19:19	PN	10	GCMSJ	TO-15	
MSJ1614-IC1614	J32263.D	07/14/15 20:13	PN	5	GCMSJ	TO-15	
MSJ1614-IC1614	J32264.D	07/14/15 21:07	PN	2	GCMSJ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.88	9.69	0.607	ok	0.608	0.548-0.668
Acrolein	5.73	9.69	0.591	ok	0.593	0.533-0.653
Acrylonitrile	6.40	9.69	0.660	ok	0.660	0.600-0.720
1,3-Butadiene	4.77	9.69	0.492	ok	0.493	0.433-0.553
Benzene	12.00	12.55	0.956	ok	0.956	0.896-1.016
Bromodichloromethane	13.60	12.55	1.084	ok	1.084	1.024-1.144
Bromomethane	5.06	9.69	0.522	ok	0.523	0.463-0.583
Bromoethene	5.62	9.69	0.580	ok	0.581	0.521-0.641
Benzyl Chloride	23.92	20.15	1.187	ok	1.187	1.127-1.247
Carbon disulfide	7.31	9.69	0.754	ok	0.755	0.695-0.815
Chlorobenzene	20.24	20.15	1.004	ok	1.004	0.944-1.064
Chloroethane	5.24	9.69	0.541	ok	0.541	0.481-0.601
Chloroform	9.87	9.69	1.019	ok	1.019	0.959-1.079
Chloromethane	4.39	9.69	0.453	ok	0.454	0.394-0.514
3-Chloropropene	7.08	9.69	0.731	ok	0.731	0.671-0.791
Carbon tetrachloride	12.22	9.69	1.261	ok	1.263	1.203-1.323
Cyclohexane	12.42	12.55	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	8.35	9.69	0.862	ok	0.862	0.802-0.922
1,1-Dichloroethylene	6.80	9.69	0.702	ok	0.703	0.643-0.763
1,2-Dibromoethane	18.13	20.15	0.900	ok	0.900	0.840-0.960
1,2-Dichloroethane	10.92	9.69	1.127	ok	1.128	1.068-1.188
1,2-Dichloropropane	13.29	12.55	1.059	ok	1.059	0.999-1.119
1,3-Dichloropropane	16.93	12.55	1.349	ok	1.350	1.290-1.410
Dichlorodifluoromethane	4.22	9.69	0.436	ok	0.435	0.375-0.495
Dibromochloromethane	17.67	20.15	0.877	ok	0.876	0.816-0.936
trans-1,2-Dichloroethylene	8.09	9.69	0.835	ok	0.835	0.775-0.895
cis-1,2-Dichloroethylene	9.46	9.69	0.976	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	15.13	12.55	1.206	ok	1.207	1.147-1.267
Ethanol	5.36	9.69	0.553	ok	0.553	0.493-0.613
Ethylbenzene	20.91	20.15	1.038	ok	1.038	0.978-1.098
Ethyl Acetate	9.76	9.69	1.007	ok	1.009	0.949-1.069
Freon 113	7.25	9.69	0.748	ok	0.749	0.689-0.809
Freon 114	4.49	9.69	0.463	ok	0.464	0.404-0.524
Heptane	14.18	12.55	1.130	ok	1.130	1.070-1.190
Hexane	9.74	9.69	1.005	ok	1.006	0.946-1.066
2-Hexanone	17.39	20.15	0.863	ok	0.863	0.803-0.923
Isopropyl Alcohol	6.15	9.69	0.635	ok	0.635	0.575-0.695
Methylene chloride	6.94	9.69	0.716	ok	0.716	0.656-0.776
Methyl ethyl ketone	8.86	9.69	0.914	ok	0.916	0.856-0.976
Methyl Isobutyl Ketone	15.21	12.55	1.212	ok	1.214	1.154-1.274

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSJ1614-IC1614	J32256.D	07/14/15 13:29	PN	0.2	GCMSJ	TO-15	
MSJ1614-IC1614	J32257.D	07/14/15 14:54	PN	0.5	GCMSJ	TO-15	
MSJ1614-IC1614	J32259.D	07/14/15 16:41	PN	40	GCMSJ	TO-15	
MSJ1614-IC1614	J32260.D	07/14/15 17:34	PN	30	GCMSJ	TO-15	Reporting this level
MSJ1614-IC1614	J32261.D	07/14/15 18:26	PN	20	GCMSJ	TO-15	
MSJ1614-ICC1614	J32262.D	07/14/15 19:19	PN	10	GCMSJ	TO-15	
MSJ1614-IC1614	J32263.D	07/14/15 20:13	PN	5	GCMSJ	TO-15	
MSJ1614-IC1614	J32264.D	07/14/15 21:07	PN	2	GCMSJ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Methyl Tert Butyl Ether	8.42	9.69	0.869	ok	0.871	0.811-0.931
Methylmethacrylate	14.02	12.55	1.117	ok	1.118	1.058-1.178
Nonane	22.46	20.15	1.115	ok	1.115	1.055-1.175
Pentane	6.47	9.69	0.668	ok	0.668	0.608-0.728
Propylene	4.14	9.69	0.427	ok	0.428	0.368-0.488
Styrene	21.86	20.15	1.085	ok	1.085	1.025-1.145
1,1,1-Trichloroethane	11.30	9.69	1.166	ok	1.167	1.107-1.227
1,1,1,2-Tetrachloroethane	20.21	20.15	1.003	ok	1.003	0.943-1.063
2,2,4-Trimethylpentane	13.73	12.55	1.094	ok	1.095	1.035-1.155
Tertiary Butyl Alcohol	6.85	9.69	0.707	ok	0.708	0.648-0.768
Tetrachloroethylene	19.00	20.15	0.943	ok	0.943	0.883-1.003
Tetrahydrofuran	10.44	9.69	1.077	ok	1.081	1.021-1.141
Toluene	16.88	12.55	1.345	ok	1.346	1.286-1.406
Trichloroethylene	13.68	12.55	1.090	ok	1.090	1.030-1.150
Trichlorofluoromethane	6.08	9.69	0.627	ok	0.628	0.568-0.688
Vinyl chloride	4.63	9.69	0.478	ok	0.478	0.418-0.538
Vinyl Acetate	8.53	9.69	0.880	ok	0.881	0.821-0.941
m,p-Xylene	21.25	20.15	1.055	ok	1.054	0.994-1.114

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.69	ok	9.67	9.34-10.00	373279	ok	323660	194196-453124
1,4-Difluorobenzene	12.55	ok	12.53	12.20-12.86	1671432	ok	1356455	813873-1899037
Chlorobenzene-D5	20.15	ok	20.14	19.81-20.47	944247	ok	753952	452371-1055533

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSJ1614-IC1614	J32256.D	07/14/15 13:29	PN	0.2	GCMSJ	TO-15	
MSJ1614-IC1614	J32257.D	07/14/15 14:54	PN	0.5	GCMSJ	TO-15	
MSJ1614-IC1614	J32259.D	07/14/15 16:41	PN	40	GCMSJ	TO-15	
MSJ1614-IC1614	J32260.D	07/14/15 17:34	PN	30	GCMSJ	TO-15	
MSJ1614-IC1614	J32261.D	07/14/15 18:26	PN	20	GCMSJ	TO-15	Reporting this level
MSJ1614-ICC1614	J32262.D	07/14/15 19:19	PN	10	GCMSJ	TO-15	
MSJ1614-IC1614	J32263.D	07/14/15 20:13	PN	5	GCMSJ	TO-15	
MSJ1614-IC1614	J32264.D	07/14/15 21:07	PN	2	GCMSJ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.88	9.69	0.607	ok	0.608	0.548-0.668
Acrolein	5.74	9.69	0.592	ok	0.593	0.533-0.653
Acrylonitrile	6.40	9.69	0.660	ok	0.660	0.600-0.720
1,3-Butadiene	4.77	9.69	0.492	ok	0.493	0.433-0.553
Benzene	12.00	12.55	0.956	ok	0.956	0.896-1.016
Bromodichloromethane	13.60	12.55	1.084	ok	1.084	1.024-1.144
Bromomethane	5.06	9.69	0.522	ok	0.523	0.463-0.583
Bromoethene	5.62	9.69	0.580	ok	0.581	0.521-0.641
Benzyl Chloride	23.91	20.14	1.187	ok	1.187	1.127-1.247
Carbon disulfide	7.31	9.69	0.754	ok	0.755	0.695-0.815
Chlorobenzene	20.23	20.14	1.004	ok	1.004	0.944-1.064
Chloroethane	5.24	9.69	0.541	ok	0.541	0.481-0.601
Chloroform	9.86	9.69	1.018	ok	1.019	0.959-1.079
Chloromethane	4.39	9.69	0.453	ok	0.454	0.394-0.514
3-Chloropropene	7.08	9.69	0.731	ok	0.731	0.671-0.791
Carbon tetrachloride	12.22	9.69	1.261	ok	1.263	1.203-1.323
Cyclohexane	12.42	12.55	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	8.35	9.69	0.862	ok	0.862	0.802-0.922
1,1-Dichloroethylene	6.80	9.69	0.702	ok	0.703	0.643-0.763
1,2-Dibromoethane	18.12	20.14	0.900	ok	0.900	0.840-0.960
1,2-Dichloroethane	10.92	9.69	1.127	ok	1.128	1.068-1.188
1,2-Dichloropropane	13.28	12.55	1.058	ok	1.059	0.999-1.119
1,3-Dichloropropane	16.93	12.55	1.349	ok	1.350	1.290-1.410
Dichlorodifluoromethane	4.22	9.69	0.436	ok	0.435	0.375-0.495
Dibromochloromethane	17.66	20.14	0.877	ok	0.876	0.816-0.936
trans-1,2-Dichloroethylene	8.09	9.69	0.835	ok	0.835	0.775-0.895
cis-1,2-Dichloroethylene	9.46	9.69	0.976	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	15.13	12.55	1.206	ok	1.207	1.147-1.267
Ethanol	5.36	9.69	0.553	ok	0.553	0.493-0.613
Ethylbenzene	20.90	20.14	1.038	ok	1.038	0.978-1.098
Ethyl Acetate	9.76	9.69	1.007	ok	1.009	0.949-1.069
Freon 113	7.25	9.69	0.748	ok	0.749	0.689-0.809
Freon 114	4.49	9.69	0.463	ok	0.464	0.404-0.524
Heptane	14.18	12.55	1.130	ok	1.130	1.070-1.190
Hexane	9.74	9.69	1.005	ok	1.006	0.946-1.066
2-Hexanone	17.39	20.14	0.863	ok	0.863	0.803-0.923
Isopropyl Alcohol	6.15	9.69	0.635	ok	0.635	0.575-0.695
Methylene chloride	6.94	9.69	0.716	ok	0.716	0.656-0.776
Methyl ethyl ketone	8.86	9.69	0.914	ok	0.916	0.856-0.976
Methyl Isobutyl Ketone	15.20	12.55	1.211	ok	1.214	1.154-1.274

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSJ1614-IC1614	J32256.D	07/14/15 13:29	PN	0.2	GCMSJ	TO-15	
MSJ1614-IC1614	J32257.D	07/14/15 14:54	PN	0.5	GCMSJ	TO-15	
MSJ1614-IC1614	J32259.D	07/14/15 16:41	PN	40	GCMSJ	TO-15	
MSJ1614-IC1614	J32260.D	07/14/15 17:34	PN	30	GCMSJ	TO-15	
MSJ1614-IC1614	J32261.D	07/14/15 18:26	PN	20	GCMSJ	TO-15	Reporting this level
MSJ1614-ICC1614	J32262.D	07/14/15 19:19	PN	10	GCMSJ	TO-15	
MSJ1614-IC1614	J32263.D	07/14/15 20:13	PN	5	GCMSJ	TO-15	
MSJ1614-IC1614	J32264.D	07/14/15 21:07	PN	2	GCMSJ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Methyl Tert Butyl Ether	8.42	9.69	0.869	ok	0.871	0.811-0.931
Methylmethacrylate	14.01	12.55	1.116	ok	1.118	1.058-1.178
Nonane	22.46	20.14	1.115	ok	1.115	1.055-1.175
Pentane	6.47	9.69	0.668	ok	0.668	0.608-0.728
Propylene	4.14	9.69	0.427	ok	0.428	0.368-0.488
Styrene	21.86	20.14	1.085	ok	1.085	1.025-1.145
1,1,1-Trichloroethane	11.30	9.69	1.166	ok	1.167	1.107-1.227
1,1,1,2-Tetrachloroethane	20.20	20.14	1.003	ok	1.003	0.943-1.063
2,2,4-Trimethylpentane	13.73	12.55	1.094	ok	1.095	1.035-1.155
Tertiary Butyl Alcohol	6.84	9.69	0.706	ok	0.708	0.648-0.768
Tetrachloroethylene	19.00	20.14	0.943	ok	0.943	0.883-1.003
Tetrahydrofuran	10.45	9.69	1.078	ok	1.081	1.021-1.141
Toluene	16.88	12.55	1.345	ok	1.346	1.286-1.406
Trichloroethylene	13.67	12.55	1.089	ok	1.090	1.030-1.150
Trichlorofluoromethane	6.08	9.69	0.627	ok	0.628	0.568-0.688
Vinyl chloride	4.63	9.69	0.478	ok	0.478	0.418-0.538
Vinyl Acetate	8.53	9.69	0.880	ok	0.881	0.821-0.941
m,p-Xylene	21.24	20.14	1.055	ok	1.054	0.994-1.114

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.69	ok	9.67	9.34-10.00	390371	ok	323660	194196-453124
1,4-Difluorobenzene	12.55	ok	12.53	12.20-12.86	1716884	ok	1356455	813873-1899037
Chlorobenzene-D5	20.14	ok	20.14	19.81-20.47	962212	ok	753952	452371-1055533

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSJ1614-IC1614	J32256.D	07/14/15 13:29	PN	0.2	GCMSJ	TO-15	
MSJ1614-IC1614	J32257.D	07/14/15 14:54	PN	0.5	GCMSJ	TO-15	
MSJ1614-IC1614	J32259.D	07/14/15 16:41	PN	40	GCMSJ	TO-15	
MSJ1614-IC1614	J32260.D	07/14/15 17:34	PN	30	GCMSJ	TO-15	
MSJ1614-IC1614	J32261.D	07/14/15 18:26	PN	20	GCMSJ	TO-15	
MSJ1614-ICC1614	J32262.D	07/14/15 19:19	PN	10	GCMSJ	TO-15	Reporting this level
MSJ1614-IC1614	J32263.D	07/14/15 20:13	PN	5	GCMSJ	TO-15	
MSJ1614-IC1614	J32264.D	07/14/15 21:07	PN	2	GCMSJ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.88	9.68	0.607	ok	0.608	0.548-0.668
Acrolein	5.73	9.68	0.592	ok	0.593	0.533-0.653
Acrylonitrile	6.38	9.68	0.659	ok	0.660	0.600-0.720
1,3-Butadiene	4.77	9.68	0.493	ok	0.493	0.433-0.553
Benzene	11.99	12.53	0.957	ok	0.956	0.896-1.016
Bromodichloromethane	13.59	12.53	1.085	ok	1.084	1.024-1.144
Bromoform	21.33	20.14	1.059	ok	1.059	0.999-1.119
Bromomethane	5.06	9.68	0.523	ok	0.523	0.463-0.583
Bromoethene	5.62	9.68	0.581	ok	0.581	0.521-0.641
n-Butylbenzene	26.64	20.14	1.323	ok	1.323	1.263-1.383
sec-Butylbenzene	25.61	20.14	1.272	ok	1.272	1.212-1.332
Benzyl Chloride	23.91	20.14	1.187	ok	1.187	1.127-1.247
Carbon disulfide	7.31	9.68	0.755	ok	0.755	0.695-0.815
Chlorobenzene	20.22	20.14	1.004	ok	1.004	0.944-1.064
Chloroethane	5.24	9.68	0.541	ok	0.541	0.481-0.601
Chloroform	9.86	9.68	1.019	ok	1.019	0.959-1.079
Chloromethane	4.39	9.68	0.454	ok	0.454	0.394-0.514
3-Chloropropene	7.07	9.68	0.730	ok	0.731	0.671-0.791
2-Chlorotoluene	23.91	20.14	1.187	ok	1.187	1.127-1.247
Carbon tetrachloride	12.22	9.68	1.262	ok	1.263	1.203-1.323
Cyclohexane	12.41	12.53	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	8.34	9.68	0.862	ok	0.862	0.802-0.922
1,1-Dichloroethylene	6.80	9.68	0.702	ok	0.703	0.643-0.763
1,2-Dibromoethane	18.12	20.14	0.900	ok	0.900	0.840-0.960
1,2-Dichloroethane	10.92	9.68	1.128	ok	1.128	1.068-1.188
1,2-Dichloropropane	13.28	12.53	1.060	ok	1.059	0.999-1.119
1,3-Dichloropropane	16.92	12.53	1.350	ok	1.350	1.290-1.410
1,4-Dioxane	13.68	12.53	1.092	ok	1.092	1.032-1.152
Dichlorodifluoromethane	4.21	9.68	0.435	ok	0.435	0.375-0.495
Dibromochloromethane	17.65	20.14	0.876	ok	0.876	0.816-0.936
trans-1,2-Dichloroethylene	8.08	9.68	0.835	ok	0.835	0.775-0.895
cis-1,2-Dichloroethylene	9.44	9.68	0.975	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	15.13	12.53	1.208	ok	1.207	1.147-1.267
m-Dichlorobenzene	25.39	20.14	1.261	ok	1.261	1.201-1.321
o-Dichlorobenzene	26.14	20.14	1.298	ok	1.298	1.238-1.358
p-Dichlorobenzene	25.52	20.14	1.267	ok	1.267	1.207-1.327
trans-1,3-Dichloropropene	16.05	12.53	1.281	ok	1.281	1.221-1.341
Ethanol	5.35	9.68	0.553	ok	0.553	0.493-0.613
Ethylbenzene	20.90	20.14	1.038	ok	1.038	0.978-1.098
Ethyl Acetate	9.75	9.68	1.007	ok	1.009	0.949-1.069

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSJ1614-IC1614	J32256.D	07/14/15 13:29	PN	0.2	GCMSJ	TO-15	
MSJ1614-IC1614	J32257.D	07/14/15 14:54	PN	0.5	GCMSJ	TO-15	
MSJ1614-IC1614	J32259.D	07/14/15 16:41	PN	40	GCMSJ	TO-15	
MSJ1614-IC1614	J32260.D	07/14/15 17:34	PN	30	GCMSJ	TO-15	
MSJ1614-IC1614	J32261.D	07/14/15 18:26	PN	20	GCMSJ	TO-15	
MSJ1614-ICC1614	J32262.D	07/14/15 19:19	PN	10	GCMSJ	TO-15	Reporting this level
MSJ1614-IC1614	J32263.D	07/14/15 20:13	PN	5	GCMSJ	TO-15	
MSJ1614-IC1614	J32264.D	07/14/15 21:07	PN	2	GCMSJ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	24.24	20.14	1.204	ok	1.204	1.144-1.264
Freon 113	7.25	9.68	0.749	ok	0.749	0.689-0.809
Freon 114	4.49	9.68	0.464	ok	0.464	0.404-0.524
Heptane	14.16	12.53	1.130	ok	1.130	1.070-1.190
Hexachlorobutadiene	29.53	20.14	1.466	ok	1.466	1.406-1.526
Hexane	9.74	9.68	1.006	ok	1.006	0.946-1.066
2-Hexanone	17.38	20.14	0.863	ok	0.863	0.803-0.923
Isopropylbenzene	23.08	20.14	1.146	ok	1.146	1.086-1.206
Isopropyl Alcohol	6.14	9.68	0.634	ok	0.635	0.575-0.695
p-Isopropyltoluene	25.90	20.14	1.286	ok	1.286	1.226-1.346
Methylene chloride	6.93	9.68	0.716	ok	0.716	0.656-0.776
Methyl ethyl ketone	8.85	9.68	0.914	ok	0.916	0.856-0.976
Methyl Isobutyl Ketone	15.20	12.53	1.213	ok	1.214	1.154-1.274
Methyl Tert Butyl Ether	8.42	9.68	0.870	ok	0.871	0.811-0.931
Methylmethacrylate	14.01	12.53	1.118	ok	1.118	1.058-1.178
Naphthalene	29.01	20.14	1.440	ok	1.440	1.380-1.500
Nonane	22.45	20.14	1.115	ok	1.115	1.055-1.175
Pentane	6.47	9.68	0.668	ok	0.668	0.608-0.728
Propylene	4.14	9.68	0.428	ok	0.428	0.368-0.488
Styrene	21.85	20.14	1.085	ok	1.085	1.025-1.145
1,1,1-Trichloroethane	11.29	9.68	1.166	ok	1.167	1.107-1.227
1,1,1,2-Tetrachloroethane	20.19	20.14	1.002	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	22.02	20.14	1.093	ok	1.093	1.033-1.153
1,1,2-Trichloroethane	16.36	12.53	1.306	ok	1.306	1.246-1.366
1,2,4-Trichlorobenzene	28.84	20.14	1.432	ok	1.432	1.372-1.492
1,2,4-Trimethylbenzene	25.12	20.14	1.247	ok	1.247	1.187-1.307
1,3,5-Trimethylbenzene	24.38	20.14	1.211	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	13.72	12.53	1.095	ok	1.095	1.035-1.155
Tertiary Butyl Alcohol	6.83	9.68	0.706	ok	0.708	0.648-0.768
tert-Butylbenzene	25.11	20.14	1.247	ok	1.247	1.187-1.307
Tetrachloroethylene	18.99	20.14	0.943	ok	0.943	0.883-1.003
Tetrahydrofuran	10.44	9.68	1.079	ok	1.081	1.021-1.141
Toluene	16.87	12.53	1.346	ok	1.346	1.286-1.406
Trichloroethylene	13.67	12.53	1.091	ok	1.090	1.030-1.150
Trichlorofluoromethane	6.07	9.68	0.627	ok	0.628	0.568-0.688
Vinyl chloride	4.62	9.68	0.477	ok	0.478	0.418-0.538
Vinyl Acetate	8.52	9.68	0.880	ok	0.881	0.821-0.941
m,p-Xylene	21.23	20.14	1.054	ok	1.054	0.994-1.114
o-Xylene	22.04	20.14	1.094	ok	1.094	1.034-1.154

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSJ1614-IC1614	J32256.D	07/14/15 13:29	PN	0.2	GCMSJ	TO-15	
MSJ1614-IC1614	J32257.D	07/14/15 14:54	PN	0.5	GCMSJ	TO-15	
MSJ1614-IC1614	J32259.D	07/14/15 16:41	PN	40	GCMSJ	TO-15	
MSJ1614-IC1614	J32260.D	07/14/15 17:34	PN	30	GCMSJ	TO-15	
MSJ1614-IC1614	J32261.D	07/14/15 18:26	PN	20	GCMSJ	TO-15	
MSJ1614-ICC1614	J32262.D	07/14/15 19:19	PN	10	GCMSJ	TO-15	Reporting this level
MSJ1614-IC1614	J32263.D	07/14/15 20:13	PN	5	GCMSJ	TO-15	
MSJ1614-IC1614	J32264.D	07/14/15 21:07	PN	2	GCMSJ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.68	ok	9.67	9.34-10.00	387870	ok	323660	194196-453124
1,4-Difluorobenzene	12.53	ok	12.53	12.20-12.86	1674502	ok	1356455	813873-1899037
Chlorobenzene-D5	20.14	ok	20.14	19.81-20.47	941760	ok	753952	452371-1055533

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSJ1614-IC1614	J32256.D	07/14/15 13:29	PN	0.2	GCMSJ	TO-15	
MSJ1614-IC1614	J32257.D	07/14/15 14:54	PN	0.5	GCMSJ	TO-15	
MSJ1614-IC1614	J32259.D	07/14/15 16:41	PN	40	GCMSJ	TO-15	
MSJ1614-IC1614	J32260.D	07/14/15 17:34	PN	30	GCMSJ	TO-15	
MSJ1614-IC1614	J32261.D	07/14/15 18:26	PN	20	GCMSJ	TO-15	
MSJ1614-ICC1614	J32262.D	07/14/15 19:19	PN	10	GCMSJ	TO-15	
MSJ1614-IC1614	J32263.D	07/14/15 20:13	PN	5	GCMSJ	TO-15	Reporting this level
MSJ1614-IC1614	J32264.D	07/14/15 21:07	PN	2	GCMSJ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.88	9.67	0.608	ok	0.608	0.548-0.668
Acrolein	5.74	9.67	0.594	ok	0.593	0.533-0.653
Acrylonitrile	6.39	9.67	0.661	ok	0.660	0.600-0.720
1,3-Butadiene	4.77	9.67	0.493	ok	0.493	0.433-0.553
Benzene	11.99	12.53	0.957	ok	0.956	0.896-1.016
Bromodichloromethane	13.59	12.53	1.085	ok	1.084	1.024-1.144
Bromomethane	5.06	9.67	0.523	ok	0.523	0.463-0.583
Bromoethene	5.62	9.67	0.581	ok	0.581	0.521-0.641
Benzyl Chloride	23.90	20.14	1.187	ok	1.187	1.127-1.247
Carbon disulfide	7.31	9.67	0.756	ok	0.755	0.695-0.815
Chlorobenzene	20.22	20.14	1.004	ok	1.004	0.944-1.064
Chloroethane	5.23	9.67	0.541	ok	0.541	0.481-0.601
Chloroform	9.85	9.67	1.019	ok	1.019	0.959-1.079
Chloromethane	4.39	9.67	0.454	ok	0.454	0.394-0.514
3-Chloropropene	7.08	9.67	0.732	ok	0.731	0.671-0.791
Carbon tetrachloride	12.21	9.67	1.263	ok	1.263	1.203-1.323
Cyclohexane	12.41	12.53	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	8.34	9.67	0.862	ok	0.862	0.802-0.922
1,1-Dichloroethylene	6.80	9.67	0.703	ok	0.703	0.643-0.763
1,2-Dibromoethane	18.11	20.14	0.899	ok	0.900	0.840-0.960
1,2-Dichloroethane	10.91	9.67	1.128	ok	1.128	1.068-1.188
1,2-Dichloropropane	13.28	12.53	1.060	ok	1.059	0.999-1.119
1,3-Dichloropropane	16.91	12.53	1.350	ok	1.350	1.290-1.410
Dichlorodifluoromethane	4.21	9.67	0.435	ok	0.435	0.375-0.495
Dibromochloromethane	17.65	20.14	0.876	ok	0.876	0.816-0.936
trans-1,2-Dichloroethylene	8.08	9.67	0.836	ok	0.835	0.775-0.895
cis-1,2-Dichloroethylene	9.44	9.67	0.976	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	15.12	12.53	1.207	ok	1.207	1.147-1.267
Ethanol	5.35	9.67	0.553	ok	0.553	0.493-0.613
Ethylbenzene	20.89	20.14	1.037	ok	1.038	0.978-1.098
Ethyl Acetate	9.75	9.67	1.008	ok	1.009	0.949-1.069
Freon 113	7.25	9.67	0.750	ok	0.749	0.689-0.809
Freon 114	4.49	9.67	0.464	ok	0.464	0.404-0.524
Heptane	14.16	12.53	1.130	ok	1.130	1.070-1.190
Hexane	9.74	9.67	1.007	ok	1.006	0.946-1.066
2-Hexanone	17.38	20.14	0.863	ok	0.863	0.803-0.923
Isopropyl Alcohol	6.14	9.67	0.635	ok	0.635	0.575-0.695
Methylene chloride	6.94	9.67	0.718	ok	0.716	0.656-0.776
Methyl ethyl ketone	8.85	9.67	0.915	ok	0.916	0.856-0.976
Methyl Isobutyl Ketone	15.20	12.53	1.213	ok	1.214	1.154-1.274

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSJ1614-IC1614	J32256.D	07/14/15 13:29	PN	0.2	GCMSJ	TO-15	
MSJ1614-IC1614	J32257.D	07/14/15 14:54	PN	0.5	GCMSJ	TO-15	
MSJ1614-IC1614	J32259.D	07/14/15 16:41	PN	40	GCMSJ	TO-15	
MSJ1614-IC1614	J32260.D	07/14/15 17:34	PN	30	GCMSJ	TO-15	
MSJ1614-IC1614	J32261.D	07/14/15 18:26	PN	20	GCMSJ	TO-15	
MSJ1614-ICC1614	J32262.D	07/14/15 19:19	PN	10	GCMSJ	TO-15	
MSJ1614-IC1614	J32263.D	07/14/15 20:13	PN	5	GCMSJ	TO-15	Reporting this level
MSJ1614-IC1614	J32264.D	07/14/15 21:07	PN	2	GCMSJ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Methyl Tert Butyl Ether	8.42	9.67	0.871	ok	0.871	0.811-0.931
Methylmethacrylate	14.01	12.53	1.118	ok	1.118	1.058-1.178
Nonane	22.45	20.14	1.115	ok	1.115	1.055-1.175
Pentane	6.47	9.67	0.669	ok	0.668	0.608-0.728
Propylene	4.13	9.67	0.427	ok	0.428	0.368-0.488
Styrene	21.85	20.14	1.085	ok	1.085	1.025-1.145
1,1,1-Trichloroethane	11.29	9.67	1.168	ok	1.167	1.107-1.227
1,1,1,2-Tetrachloroethane	20.19	20.14	1.002	ok	1.003	0.943-1.063
2,2,4-Trimethylpentane	13.71	12.53	1.094	ok	1.095	1.035-1.155
Tertiary Butyl Alcohol	6.83	9.67	0.706	ok	0.708	0.648-0.768
Tetrachloroethylene	18.99	20.14	0.943	ok	0.943	0.883-1.003
Tetrahydrofuran	10.45	9.67	1.081	ok	1.081	1.021-1.141
Toluene	16.87	12.53	1.346	ok	1.346	1.286-1.406
Trichloroethylene	13.67	12.53	1.091	ok	1.090	1.030-1.150
Trichlorofluoromethane	6.08	9.67	0.629	ok	0.628	0.568-0.688
Vinyl chloride	4.62	9.67	0.478	ok	0.478	0.418-0.538
Vinyl Acetate	8.52	9.67	0.881	ok	0.881	0.821-0.941
m,p-Xylene	21.23	20.14	1.054	ok	1.054	0.994-1.114

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.67	ok	9.67	9.34-10.00	322223	ok	323660	194196-453124
1,4-Difluorobenzene	12.53	ok	12.53	12.20-12.86	1206883	ok	1356455	813873-1899037
Chlorobenzene-D5	20.14	ok	20.14	19.81-20.47	693086	ok	753952	452371-1055533

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSJ1614-IC1614	J32256.D	07/14/15 13:29	PN	0.2	GCMSJ	TO-15	
MSJ1614-IC1614	J32257.D	07/14/15 14:54	PN	0.5	GCMSJ	TO-15	
MSJ1614-IC1614	J32259.D	07/14/15 16:41	PN	40	GCMSJ	TO-15	
MSJ1614-IC1614	J32260.D	07/14/15 17:34	PN	30	GCMSJ	TO-15	
MSJ1614-IC1614	J32261.D	07/14/15 18:26	PN	20	GCMSJ	TO-15	
MSJ1614-ICC1614	J32262.D	07/14/15 19:19	PN	10	GCMSJ	TO-15	
MSJ1614-IC1614	J32263.D	07/14/15 20:13	PN	5	GCMSJ	TO-15	
MSJ1614-IC1614	J32264.D	07/14/15 21:07	PN	2	GCMSJ	TO-15	Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.88	9.67	0.608	ok	0.608	0.548-0.668
Acrolein	5.74	9.67	0.594	ok	0.593	0.533-0.653
Acrylonitrile	6.39	9.67	0.661	ok	0.660	0.600-0.720
1,3-Butadiene	4.77	9.67	0.493	ok	0.493	0.433-0.553
Benzene	11.98	12.53	0.956	ok	0.956	0.896-1.016
Bromodichloromethane	13.59	12.53	1.085	ok	1.084	1.024-1.144
Bromomethane	5.06	9.67	0.523	ok	0.523	0.463-0.583
Bromoethene	5.62	9.67	0.581	ok	0.581	0.521-0.641
Benzyl Chloride	23.90	20.14	1.187	ok	1.187	1.127-1.247
Carbon disulfide	7.31	9.67	0.756	ok	0.755	0.695-0.815
Chlorobenzene	20.21	20.14	1.003	ok	1.004	0.944-1.064
Chloroethane	5.24	9.67	0.542	ok	0.541	0.481-0.601
Chloroform	9.85	9.67	1.019	ok	1.019	0.959-1.079
Chloromethane	4.39	9.67	0.454	ok	0.454	0.394-0.514
3-Chloropropene	7.07	9.67	0.731	ok	0.731	0.671-0.791
Carbon tetrachloride	12.21	9.67	1.263	ok	1.263	1.203-1.323
Cyclohexane	12.41	12.53	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	8.33	9.67	0.861	ok	0.862	0.802-0.922
1,1-Dichloroethylene	6.80	9.67	0.703	ok	0.703	0.643-0.763
1,2-Dibromoethane	18.12	20.14	0.900	ok	0.900	0.840-0.960
1,2-Dichloroethane	10.91	9.67	1.128	ok	1.128	1.068-1.188
1,2-Dichloropropane	13.27	12.53	1.059	ok	1.059	0.999-1.119
1,3-Dichloropropane	16.91	12.53	1.350	ok	1.350	1.290-1.410
Dichlorodifluoromethane	4.21	9.67	0.435	ok	0.435	0.375-0.495
Dibromochloromethane	17.64	20.14	0.876	ok	0.876	0.816-0.936
trans-1,2-Dichloroethylene	8.08	9.67	0.836	ok	0.835	0.775-0.895
cis-1,2-Dichloroethylene	9.44	9.67	0.976	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	15.12	12.53	1.207	ok	1.207	1.147-1.267
Ethanol	5.35	9.67	0.553	ok	0.553	0.493-0.613
Ethylbenzene	20.89	20.14	1.037	ok	1.038	0.978-1.098
Ethyl Acetate	9.76	9.67	1.009	ok	1.009	0.949-1.069
Freon 113	7.24	9.67	0.749	ok	0.749	0.689-0.809
Freon 114	4.49	9.67	0.464	ok	0.464	0.404-0.524
Heptane	14.16	12.53	1.130	ok	1.130	1.070-1.190
Hexane	9.73	9.67	1.006	ok	1.006	0.946-1.066
2-Hexanone	17.39	20.14	0.863	ok	0.863	0.803-0.923
Isopropyl Alcohol	6.15	9.67	0.636	ok	0.635	0.575-0.695
Methylene chloride	6.93	9.67	0.717	ok	0.716	0.656-0.776
Methyl ethyl ketone	8.86	9.67	0.916	ok	0.916	0.856-0.976
Methyl Isobutyl Ketone	15.21	12.53	1.214	ok	1.214	1.154-1.274

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSJ1614-IC1614	J32256.D	07/14/15 13:29	PN	0.2	GCMSJ	TO-15	
MSJ1614-IC1614	J32257.D	07/14/15 14:54	PN	0.5	GCMSJ	TO-15	
MSJ1614-IC1614	J32259.D	07/14/15 16:41	PN	40	GCMSJ	TO-15	
MSJ1614-IC1614	J32260.D	07/14/15 17:34	PN	30	GCMSJ	TO-15	
MSJ1614-IC1614	J32261.D	07/14/15 18:26	PN	20	GCMSJ	TO-15	
MSJ1614-ICC1614	J32262.D	07/14/15 19:19	PN	10	GCMSJ	TO-15	
MSJ1614-IC1614	J32263.D	07/14/15 20:13	PN	5	GCMSJ	TO-15	
MSJ1614-IC1614	J32264.D	07/14/15 21:07	PN	2	GCMSJ	TO-15	Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Methyl Tert Butyl Ether	8.43	9.67	0.872	ok	0.871	0.811-0.931
Methylmethacrylate	14.01	12.53	1.118	ok	1.118	1.058-1.178
Nonane	22.45	20.14	1.115	ok	1.115	1.055-1.175
Pentane	6.47	9.67	0.669	ok	0.668	0.608-0.728
Propylene	4.14	9.67	0.428	ok	0.428	0.368-0.488
Styrene	21.85	20.14	1.085	ok	1.085	1.025-1.145
1,1,1-Trichloroethane	11.29	9.67	1.168	ok	1.167	1.107-1.227
1,1,1,2-Tetrachloroethane	20.19	20.14	1.002	ok	1.003	0.943-1.063
2,2,4-Trimethylpentane	13.72	12.53	1.095	ok	1.095	1.035-1.155
Tertiary Butyl Alcohol	6.85	9.67	0.708	ok	0.708	0.648-0.768
Tetrachloroethylene	18.99	20.14	0.943	ok	0.943	0.883-1.003
Tetrahydrofuran	10.47	9.67	1.083	ok	1.081	1.021-1.141
Toluene	16.87	12.53	1.346	ok	1.346	1.286-1.406
Trichloroethylene	13.66	12.53	1.090	ok	1.090	1.030-1.150
Trichlorofluoromethane	6.08	9.67	0.629	ok	0.628	0.568-0.688
Vinyl chloride	4.62	9.67	0.478	ok	0.478	0.418-0.538
Vinyl Acetate	8.52	9.67	0.881	ok	0.881	0.821-0.941
m,p-Xylene	21.23	20.14	1.054	ok	1.054	0.994-1.114

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.67	ok	9.67	9.34-10.00	297090	ok	323660	194196-453124
1,4-Difluorobenzene	12.53	ok	12.53	12.20-12.86	1148130	ok	1356455	813873-1899037
Chlorobenzene-D5	20.14	ok	20.14	19.81-20.47	621436	ok	753952	452371-1055533

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1321-IC1321	Q30475.D	06/30/15 21:04	AA	0.2	GCMSQ	TO-15	Reporting this level
MSQ1321-IC1321	Q30476.D	06/30/15 21:53	AA	0.5	GCMSQ	TO-15	
MSQ1321-IC1321	Q30477.D	06/30/15 22:41	AA	2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30478.D	06/30/15 23:29	AA	5	GCMSQ	TO-15	
MSQ1321-ICC1321	Q30479.D	07/01/15 00:17	AA	10	GCMSQ	TO-15	
MSQ1321-IC1321	Q30480.D	07/01/15 01:05	AA	20	GCMSQ	TO-15	
MSQ1321-IC1321	Q30481.D	07/01/15 01:52	AA	30	GCMSQ	TO-15	
MSQ1321-IC1321	Q30482.D	07/01/15 02:40	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.57	9.16	0.608	ok	0.607	0.547-0.667
Acrolein	5.43	9.16	0.593	ok	0.593	0.533-0.653
Acrylonitrile	6.06	9.16	0.662	ok	0.662	0.602-0.722
1,3-Butadiene	4.51	9.16	0.492	ok	0.492	0.432-0.552
Benzene	11.30	11.82	0.956	ok	0.956	0.896-1.016
Bromodichloromethane	12.80	11.82	1.083	ok	1.083	1.023-1.143
Bromoform	20.00	18.88	1.059	ok	1.059	0.999-1.119
Bromomethane	4.79	9.16	0.523	ok	0.523	0.463-0.583
Bromoethene	5.32	9.16	0.581	ok	0.581	0.521-0.641
n-Butylbenzene	24.91	18.88	1.319	ok	1.319	1.259-1.379
sec-Butylbenzene	23.94	18.88	1.268	ok	1.268	1.208-1.328
Benzyl Chloride	23.70	18.88	1.255	ok	1.255	1.195-1.315
Carbon disulfide	6.94	9.16	0.758	ok	0.757	0.697-0.817
Chlorobenzene	18.96	18.88	1.004	ok	1.004	0.944-1.064
Chloroethane	4.96	9.16	0.541	ok	0.541	0.481-0.601
Chloroform	9.33	9.16	1.019	ok	1.019	0.959-1.079
Chloromethane	4.16	9.16	0.454	ok	0.454	0.394-0.514
3-Chloropropene	6.72	9.16	0.734	ok	0.733	0.673-0.793
2-Chlorotoluene	22.39	18.88	1.186	ok	1.186	1.126-1.246
Carbon tetrachloride	11.52	9.16	1.258	ok	1.257	1.197-1.317
Cyclohexane	11.70	11.82	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.91	9.16	0.864	ok	0.864	0.804-0.924
1,1-Dichloroethylene	6.46	9.16	0.705	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.92	18.88	0.896	ok	0.897	0.837-0.957
1,2-Dichloroethane	10.31	9.16	1.126	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.50	11.82	1.058	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.85	11.82	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.88	11.82	1.090	ok	1.088	1.028-1.148
Dichlorodifluoromethane	4.00	9.16	0.437	ok	0.437	0.377-0.497
Dibromochloromethane	16.50	18.88	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.67	9.16	0.837	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.95	9.16	0.977	ok	0.977	0.917-1.037
cis-1,3-Dichloropropene	14.20	11.82	1.201	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.72	18.88	1.256	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.39	18.88	1.292	ok	1.292	1.232-1.352
p-Dichlorobenzene	23.84	18.88	1.263	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.06	11.82	1.274	ok	1.274	1.214-1.334
Ethanol	5.13	9.16	0.560	ok	0.560	0.500-0.620
Ethylbenzene	19.61	18.88	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.24	9.16	1.009	ok	1.008	0.948-1.068

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1321-IC1321	Q30475.D	06/30/15 21:04	AA	0.2	GCMSQ	TO-15	Reporting this level
MSQ1321-IC1321	Q30476.D	06/30/15 21:53	AA	0.5	GCMSQ	TO-15	
MSQ1321-IC1321	Q30477.D	06/30/15 22:41	AA	2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30478.D	06/30/15 23:29	AA	5	GCMSQ	TO-15	
MSQ1321-ICC1321	Q30479.D	07/01/15 00:17	AA	10	GCMSQ	TO-15	
MSQ1321-IC1321	Q30480.D	07/01/15 01:05	AA	20	GCMSQ	TO-15	
MSQ1321-IC1321	Q30481.D	07/01/15 01:52	AA	30	GCMSQ	TO-15	
MSQ1321-IC1321	Q30482.D	07/01/15 02:40	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.71	18.88	1.203	ok	1.203	1.143-1.263
Freon 113	6.88	9.16	0.751	ok	0.751	0.691-0.811
Freon 114	4.26	9.16	0.465	ok	0.465	0.405-0.525
Heptane	13.33	11.82	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.71	18.88	1.468	ok	1.468	1.408-1.528
Hexane	9.23	9.16	1.008	ok	1.007	0.947-1.067
2-Hexanone	16.30	18.88	0.863	ok	0.862	0.802-0.922
Isopropylbenzene	21.64	18.88	1.146	ok	1.146	1.086-1.206
Isopropyl Alcohol	5.89	9.16	0.643	ok	0.642	0.582-0.702
p-Isopropyltoluene	24.21	18.88	1.282	ok	1.282	1.222-1.342
Methylene chloride	6.58	9.16	0.718	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.40	9.16	0.917	ok	0.916	0.856-0.976
Methyl Isobutyl Ketone	14.29	11.82	1.209	ok	1.207	1.147-1.267
Methyl Tert Butyl Ether	7.99	9.16	0.872	ok	0.871	0.811-0.931
Methylmethacrylate	13.18	11.82	1.115	ok	1.115	1.055-1.175
Naphthalene	27.26	18.88	1.444	ok	1.444	1.384-1.504
Nonane	21.11	18.88	1.118	ok	1.118	1.058-1.178
Pentane	6.15	9.16	0.671	ok	0.671	0.611-0.731
Propylene	3.92	9.16	0.428	ok	0.428	0.368-0.488
Styrene	20.51	18.88	1.086	ok	1.086	1.026-1.146
1,1,1-Trichloroethane	10.66	9.16	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.93	18.88	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.66	18.88	1.094	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.34	11.82	1.298	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.12	18.88	1.436	ok	1.436	1.376-1.496
1,2,4-Trimethylbenzene	23.50	18.88	1.245	ok	1.245	1.185-1.305
1,3,5-Trimethylbenzene	22.84	18.88	1.210	ok	1.210	1.150-1.270
2,2,4-Trimethylpentane	12.91	11.82	1.092	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.57	9.16	0.717	ok	0.714	0.654-0.774
tert-Butylbenzene	23.49	18.88	1.244	ok	1.244	1.184-1.304
Tetrachloroethylene	17.75	18.88	0.940	ok	0.941	0.881-1.001
Tetrahydrofuran	9.87	9.16	1.078	ok	1.076	1.016-1.136
Toluene	15.79	11.82	1.336	ok	1.336	1.276-1.396
Trichloroethylene	12.86	11.82	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.77	9.16	0.630	ok	0.629	0.569-0.689
Vinyl chloride	4.38	9.16	0.478	ok	0.478	0.418-0.538
Vinyl Acetate	8.08	9.16	0.882	ok	0.882	0.822-0.942
m,p-Xylene	19.93	18.88	1.056	ok	1.056	0.996-1.116
o-Xylene	20.68	18.88	1.095	ok	1.095	1.035-1.155

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1321-IC1321	Q30475.D	06/30/15 21:04	AA	0.2	GCMSQ	TO-15	Reporting this level
MSQ1321-IC1321	Q30476.D	06/30/15 21:53	AA	0.5	GCMSQ	TO-15	
MSQ1321-IC1321	Q30477.D	06/30/15 22:41	AA	2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30478.D	06/30/15 23:29	AA	5	GCMSQ	TO-15	
MSQ1321-ICC1321	Q30479.D	07/01/15 00:17	AA	10	GCMSQ	TO-15	
MSQ1321-IC1321	Q30480.D	07/01/15 01:05	AA	20	GCMSQ	TO-15	
MSQ1321-IC1321	Q30481.D	07/01/15 01:52	AA	30	GCMSQ	TO-15	
MSQ1321-IC1321	Q30482.D	07/01/15 02:40	AA	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.16	ok	9.16	8.83-9.49	666485	ok	692699	415619-969779
1,4-Difluorobenzene	11.82	ok	11.82	11.49-12.15	2729998	ok	2925619	1755371-4095867
Chlorobenzene-D5	18.88	ok	18.88	18.55-19.21	1220850	ok	1403832	842299-1965365

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1321-IC1321	Q30475.D	06/30/15 21:04	AA	0.2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30476.D	06/30/15 21:53	AA	0.5	GCMSQ	TO-15	Reporting this level
MSQ1321-IC1321	Q30477.D	06/30/15 22:41	AA	2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30478.D	06/30/15 23:29	AA	5	GCMSQ	TO-15	
MSQ1321-ICC1321	Q30479.D	07/01/15 00:17	AA	10	GCMSQ	TO-15	
MSQ1321-IC1321	Q30480.D	07/01/15 01:05	AA	20	GCMSQ	TO-15	
MSQ1321-IC1321	Q30481.D	07/01/15 01:52	AA	30	GCMSQ	TO-15	
MSQ1321-IC1321	Q30482.D	07/01/15 02:40	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.57	9.16	0.608	ok	0.607	0.547-0.667
Acrolein	5.43	9.16	0.593	ok	0.593	0.533-0.653
Acrylonitrile	6.06	9.16	0.662	ok	0.662	0.602-0.722
1,3-Butadiene	4.51	9.16	0.492	ok	0.492	0.432-0.552
Benzene	11.30	11.82	0.956	ok	0.956	0.896-1.016
Bromodichloromethane	12.80	11.82	1.083	ok	1.083	1.023-1.143
Bromoform	20.00	18.88	1.059	ok	1.059	0.999-1.119
Bromomethane	4.79	9.16	0.523	ok	0.523	0.463-0.583
Bromoethene	5.33	9.16	0.582	ok	0.581	0.521-0.641
n-Butylbenzene	24.91	18.88	1.319	ok	1.319	1.259-1.379
sec-Butylbenzene	23.94	18.88	1.268	ok	1.268	1.208-1.328
Benzyl Chloride	23.70	18.88	1.255	ok	1.255	1.195-1.315
Carbon disulfide	6.94	9.16	0.758	ok	0.757	0.697-0.817
Chlorobenzene	18.96	18.88	1.004	ok	1.004	0.944-1.064
Chloroethane	4.96	9.16	0.541	ok	0.541	0.481-0.601
Chloroform	9.33	9.16	1.019	ok	1.019	0.959-1.079
Chloromethane	4.16	9.16	0.454	ok	0.454	0.394-0.514
3-Chloropropene	6.72	9.16	0.734	ok	0.733	0.673-0.793
2-Chlorotoluene	22.39	18.88	1.186	ok	1.186	1.126-1.246
Carbon tetrachloride	11.52	9.16	1.258	ok	1.257	1.197-1.317
Cyclohexane	11.70	11.82	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.91	9.16	0.864	ok	0.864	0.804-0.924
1,1-Dichloroethylene	6.46	9.16	0.705	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.93	18.88	0.897	ok	0.897	0.837-0.957
1,2-Dichloroethane	10.31	9.16	1.126	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.49	11.82	1.057	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.85	11.82	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.87	11.82	1.089	ok	1.088	1.028-1.148
Dichlorodifluoromethane	4.00	9.16	0.437	ok	0.437	0.377-0.497
Dibromochloromethane	16.50	18.88	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.67	9.16	0.837	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.95	9.16	0.977	ok	0.977	0.917-1.037
cis-1,3-Dichloropropene	14.20	11.82	1.201	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.72	18.88	1.256	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.39	18.88	1.292	ok	1.292	1.232-1.352
p-Dichlorobenzene	23.84	18.88	1.263	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.06	11.82	1.274	ok	1.274	1.214-1.334
Ethanol	5.14	9.16	0.561	ok	0.560	0.500-0.620
Ethylbenzene	19.61	18.88	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.23	9.16	1.008	ok	1.008	0.948-1.068

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1321-IC1321	Q30475.D	06/30/15 21:04	AA	0.2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30476.D	06/30/15 21:53	AA	0.5	GCMSQ	TO-15	Reporting this level
MSQ1321-IC1321	Q30477.D	06/30/15 22:41	AA	2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30478.D	06/30/15 23:29	AA	5	GCMSQ	TO-15	
MSQ1321-ICC1321	Q30479.D	07/01/15 00:17	AA	10	GCMSQ	TO-15	
MSQ1321-IC1321	Q30480.D	07/01/15 01:05	AA	20	GCMSQ	TO-15	
MSQ1321-IC1321	Q30481.D	07/01/15 01:52	AA	30	GCMSQ	TO-15	
MSQ1321-IC1321	Q30482.D	07/01/15 02:40	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.71	18.88	1.203	ok	1.203	1.143-1.263
Freon 113	6.88	9.16	0.751	ok	0.751	0.691-0.811
Freon 114	4.26	9.16	0.465	ok	0.465	0.405-0.525
Heptane	13.33	11.82	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.71	18.88	1.468	ok	1.468	1.408-1.528
Hexane	9.23	9.16	1.008	ok	1.007	0.947-1.067
2-Hexanone	16.29	18.88	0.863	ok	0.862	0.802-0.922
Isopropylbenzene	21.64	18.88	1.146	ok	1.146	1.086-1.206
Isopropyl Alcohol	5.89	9.16	0.643	ok	0.642	0.582-0.702
p-Isopropyltoluene	24.21	18.88	1.282	ok	1.282	1.222-1.342
Methylene chloride	6.59	9.16	0.719	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.40	9.16	0.917	ok	0.916	0.856-0.976
Methyl Isobutyl Ketone	14.29	11.82	1.209	ok	1.207	1.147-1.267
Methyl Tert Butyl Ether	7.99	9.16	0.872	ok	0.871	0.811-0.931
Methylmethacrylate	13.18	11.82	1.115	ok	1.115	1.055-1.175
Naphthalene	27.26	18.88	1.444	ok	1.444	1.384-1.504
Nonane	21.10	18.88	1.118	ok	1.118	1.058-1.178
Pentane	6.15	9.16	0.671	ok	0.671	0.611-0.731
Propylene	3.93	9.16	0.429	ok	0.428	0.368-0.488
Styrene	20.51	18.88	1.086	ok	1.086	1.026-1.146
1,1,1-Trichloroethane	10.66	9.16	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.93	18.88	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.67	18.88	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.33	11.82	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.12	18.88	1.436	ok	1.436	1.376-1.496
1,2,4-Trimethylbenzene	23.50	18.88	1.245	ok	1.245	1.185-1.305
1,3,5-Trimethylbenzene	22.84	18.88	1.210	ok	1.210	1.150-1.270
2,2,4-Trimethylpentane	12.92	11.82	1.093	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.56	9.16	0.716	ok	0.714	0.654-0.774
tert-Butylbenzene	23.49	18.88	1.244	ok	1.244	1.184-1.304
Tetrachloroethylene	17.75	18.88	0.940	ok	0.941	0.881-1.001
Tetrahydrofuran	9.87	9.16	1.078	ok	1.076	1.016-1.136
Toluene	15.79	11.82	1.336	ok	1.336	1.276-1.396
Trichloroethylene	12.85	11.82	1.087	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.77	9.16	0.630	ok	0.629	0.569-0.689
Vinyl chloride	4.38	9.16	0.478	ok	0.478	0.418-0.538
Vinyl Acetate	8.08	9.16	0.882	ok	0.882	0.822-0.942
m,p-Xylene	19.93	18.88	1.056	ok	1.056	0.996-1.116
o-Xylene	20.68	18.88	1.095	ok	1.095	1.035-1.155

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1321-IC1321	Q30475.D	06/30/15 21:04	AA	0.2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30476.D	06/30/15 21:53	AA	0.5	GCMSQ	TO-15	Reporting this level
MSQ1321-IC1321	Q30477.D	06/30/15 22:41	AA	2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30478.D	06/30/15 23:29	AA	5	GCMSQ	TO-15	
MSQ1321-ICC1321	Q30479.D	07/01/15 00:17	AA	10	GCMSQ	TO-15	
MSQ1321-IC1321	Q30480.D	07/01/15 01:05	AA	20	GCMSQ	TO-15	
MSQ1321-IC1321	Q30481.D	07/01/15 01:52	AA	30	GCMSQ	TO-15	
MSQ1321-IC1321	Q30482.D	07/01/15 02:40	AA	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.16	ok	9.16	8.83-9.49	703464	ok	692699	415619-969779
1,4-Difluorobenzene	11.82	ok	11.82	11.49-12.15	2967920	ok	2925619	1755371-4095867
Chlorobenzene-D5	18.88	ok	18.88	18.55-19.21	1324173	ok	1403832	842299-1965365

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1321-IC1321	Q30475.D	06/30/15 21:04	AA	0.2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30476.D	06/30/15 21:53	AA	0.5	GCMSQ	TO-15	
MSQ1321-IC1321	Q30477.D	06/30/15 22:41	AA	2	GCMSQ	TO-15	Reporting this level
MSQ1321-IC1321	Q30478.D	06/30/15 23:29	AA	5	GCMSQ	TO-15	
MSQ1321-ICC1321	Q30479.D	07/01/15 00:17	AA	10	GCMSQ	TO-15	
MSQ1321-IC1321	Q30480.D	07/01/15 01:05	AA	20	GCMSQ	TO-15	
MSQ1321-IC1321	Q30481.D	07/01/15 01:52	AA	30	GCMSQ	TO-15	
MSQ1321-IC1321	Q30482.D	07/01/15 02:40	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.57	9.16	0.608	ok	0.607	0.547-0.667
Acrolein	5.43	9.16	0.593	ok	0.593	0.533-0.653
Acrylonitrile	6.06	9.16	0.662	ok	0.662	0.602-0.722
1,3-Butadiene	4.51	9.16	0.492	ok	0.492	0.432-0.552
Benzene	11.30	11.82	0.956	ok	0.956	0.896-1.016
Bromodichloromethane	12.80	11.82	1.083	ok	1.083	1.023-1.143
Bromoform	20.00	18.88	1.059	ok	1.059	0.999-1.119
Bromomethane	4.79	9.16	0.523	ok	0.523	0.463-0.583
Bromoethene	5.33	9.16	0.582	ok	0.581	0.521-0.641
n-Butylbenzene	24.91	18.88	1.319	ok	1.319	1.259-1.379
sec-Butylbenzene	23.94	18.88	1.268	ok	1.268	1.208-1.328
Benzyl Chloride	23.70	18.88	1.255	ok	1.255	1.195-1.315
Carbon disulfide	6.94	9.16	0.758	ok	0.757	0.697-0.817
Chlorobenzene	18.96	18.88	1.004	ok	1.004	0.944-1.064
Chloroethane	4.96	9.16	0.541	ok	0.541	0.481-0.601
Chloroform	9.33	9.16	1.019	ok	1.019	0.959-1.079
Chloromethane	4.16	9.16	0.454	ok	0.454	0.394-0.514
3-Chloropropene	6.72	9.16	0.734	ok	0.733	0.673-0.793
2-Chlorotoluene	22.39	18.88	1.186	ok	1.186	1.126-1.246
Carbon tetrachloride	11.52	9.16	1.258	ok	1.257	1.197-1.317
Cyclohexane	11.70	11.82	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.91	9.16	0.864	ok	0.864	0.804-0.924
1,1-Dichloroethylene	6.46	9.16	0.705	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.93	18.88	0.897	ok	0.897	0.837-0.957
1,2-Dichloroethane	10.31	9.16	1.126	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.50	11.82	1.058	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.85	11.82	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.87	11.82	1.089	ok	1.088	1.028-1.148
Dichlorodifluoromethane	4.00	9.16	0.437	ok	0.437	0.377-0.497
Dibromochloromethane	16.50	18.88	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.67	9.16	0.837	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.95	9.16	0.977	ok	0.977	0.917-1.037
cis-1,3-Dichloropropene	14.21	11.82	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.72	18.88	1.256	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.39	18.88	1.292	ok	1.292	1.232-1.352
p-Dichlorobenzene	23.84	18.88	1.263	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.06	11.82	1.274	ok	1.274	1.214-1.334
Ethanol	5.13	9.16	0.560	ok	0.560	0.500-0.620
Ethylbenzene	19.61	18.88	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.23	9.16	1.008	ok	1.008	0.948-1.068

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1321-IC1321	Q30475.D	06/30/15 21:04	AA	0.2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30476.D	06/30/15 21:53	AA	0.5	GCMSQ	TO-15	
MSQ1321-IC1321	Q30477.D	06/30/15 22:41	AA	2	GCMSQ	TO-15	Reporting this level
MSQ1321-IC1321	Q30478.D	06/30/15 23:29	AA	5	GCMSQ	TO-15	
MSQ1321-ICC1321	Q30479.D	07/01/15 00:17	AA	10	GCMSQ	TO-15	
MSQ1321-IC1321	Q30480.D	07/01/15 01:05	AA	20	GCMSQ	TO-15	
MSQ1321-IC1321	Q30481.D	07/01/15 01:52	AA	30	GCMSQ	TO-15	
MSQ1321-IC1321	Q30482.D	07/01/15 02:40	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.71	18.88	1.203	ok	1.203	1.143-1.263
Freon 113	6.88	9.16	0.751	ok	0.751	0.691-0.811
Freon 114	4.26	9.16	0.465	ok	0.465	0.405-0.525
Heptane	13.33	11.82	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.70	18.88	1.467	ok	1.468	1.408-1.528
Hexane	9.23	9.16	1.008	ok	1.007	0.947-1.067
2-Hexanone	16.29	18.88	0.863	ok	0.862	0.802-0.922
Isopropylbenzene	21.64	18.88	1.146	ok	1.146	1.086-1.206
Isopropyl Alcohol	5.88	9.16	0.642	ok	0.642	0.582-0.702
p-Isopropyltoluene	24.21	18.88	1.282	ok	1.282	1.222-1.342
Methylene chloride	6.58	9.16	0.718	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.38	9.16	0.915	ok	0.916	0.856-0.976
Methyl Isobutyl Ketone	14.28	11.82	1.208	ok	1.207	1.147-1.267
Methyl Tert Butyl Ether	7.98	9.16	0.871	ok	0.871	0.811-0.931
Methylmethacrylate	13.18	11.82	1.115	ok	1.115	1.055-1.175
Naphthalene	27.26	18.88	1.444	ok	1.444	1.384-1.504
Nonane	21.11	18.88	1.118	ok	1.118	1.058-1.178
Pentane	6.15	9.16	0.671	ok	0.671	0.611-0.731
Propylene	3.92	9.16	0.428	ok	0.428	0.368-0.488
Styrene	20.51	18.88	1.086	ok	1.086	1.026-1.146
1,1,1-Trichloroethane	10.66	9.16	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.93	18.88	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.66	18.88	1.094	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.34	11.82	1.298	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.12	18.88	1.436	ok	1.436	1.376-1.496
1,2,4-Trimethylbenzene	23.50	18.88	1.245	ok	1.245	1.185-1.305
1,3,5-Trimethylbenzene	22.84	18.88	1.210	ok	1.210	1.150-1.270
2,2,4-Trimethylpentane	12.92	11.82	1.093	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.54	9.16	0.714	ok	0.714	0.654-0.774
tert-Butylbenzene	23.49	18.88	1.244	ok	1.244	1.184-1.304
Tetrachloroethylene	17.76	18.88	0.941	ok	0.941	0.881-1.001
Tetrahydrofuran	9.86	9.16	1.076	ok	1.076	1.016-1.136
Toluene	15.79	11.82	1.336	ok	1.336	1.276-1.396
Trichloroethylene	12.86	11.82	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.77	9.16	0.630	ok	0.629	0.569-0.689
Vinyl chloride	4.38	9.16	0.478	ok	0.478	0.418-0.538
Vinyl Acetate	8.08	9.16	0.882	ok	0.882	0.822-0.942
m,p-Xylene	19.94	18.88	1.056	ok	1.056	0.996-1.116
o-Xylene	20.68	18.88	1.095	ok	1.095	1.035-1.155

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1321-IC1321	Q30475.D	06/30/15 21:04	AA	0.2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30476.D	06/30/15 21:53	AA	0.5	GCMSQ	TO-15	
MSQ1321-IC1321	Q30477.D	06/30/15 22:41	AA	2	GCMSQ	TO-15	Reporting this level
MSQ1321-IC1321	Q30478.D	06/30/15 23:29	AA	5	GCMSQ	TO-15	
MSQ1321-ICC1321	Q30479.D	07/01/15 00:17	AA	10	GCMSQ	TO-15	
MSQ1321-IC1321	Q30480.D	07/01/15 01:05	AA	20	GCMSQ	TO-15	
MSQ1321-IC1321	Q30481.D	07/01/15 01:52	AA	30	GCMSQ	TO-15	
MSQ1321-IC1321	Q30482.D	07/01/15 02:40	AA	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.16	ok	9.16	8.83-9.49	688097	ok	692699	415619-969779
1,4-Difluorobenzene	11.82	ok	11.82	11.49-12.15	2863414	ok	2925619	1755371-4095867
Chlorobenzene-D5	18.88	ok	18.88	18.55-19.21	1292855	ok	1403832	842299-1965365

Initial Calibration Retention Time/Internal Standard Area Summary

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Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1321-IC1321	Q30475.D	06/30/15 21:04	AA	0.2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30476.D	06/30/15 21:53	AA	0.5	GCMSQ	TO-15	
MSQ1321-IC1321	Q30477.D	06/30/15 22:41	AA	2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30478.D	06/30/15 23:29	AA	5	GCMSQ	TO-15	Reporting this level
MSQ1321-ICC1321	Q30479.D	07/01/15 00:17	AA	10	GCMSQ	TO-15	
MSQ1321-IC1321	Q30480.D	07/01/15 01:05	AA	20	GCMSQ	TO-15	
MSQ1321-IC1321	Q30481.D	07/01/15 01:52	AA	30	GCMSQ	TO-15	
MSQ1321-IC1321	Q30482.D	07/01/15 02:40	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.16	0.607	ok	0.607	0.547-0.667
Acrolein	5.43	9.16	0.593	ok	0.593	0.533-0.653
Acrylonitrile	6.06	9.16	0.662	ok	0.662	0.602-0.722
1,3-Butadiene	4.51	9.16	0.492	ok	0.492	0.432-0.552
Benzene	11.30	11.82	0.956	ok	0.956	0.896-1.016
Bromodichloromethane	12.80	11.82	1.083	ok	1.083	1.023-1.143
Bromoform	20.00	18.88	1.059	ok	1.059	0.999-1.119
Bromomethane	4.79	9.16	0.523	ok	0.523	0.463-0.583
Bromoethene	5.33	9.16	0.582	ok	0.581	0.521-0.641
n-Butylbenzene	24.91	18.88	1.319	ok	1.319	1.259-1.379
sec-Butylbenzene	23.94	18.88	1.268	ok	1.268	1.208-1.328
Benzyl Chloride	23.70	18.88	1.255	ok	1.255	1.195-1.315
Carbon disulfide	6.94	9.16	0.758	ok	0.757	0.697-0.817
Chlorobenzene	18.96	18.88	1.004	ok	1.004	0.944-1.064
Chloroethane	4.97	9.16	0.543	ok	0.541	0.481-0.601
Chloroform	9.33	9.16	1.019	ok	1.019	0.959-1.079
Chloromethane	4.16	9.16	0.454	ok	0.454	0.394-0.514
3-Chloropropene	6.72	9.16	0.734	ok	0.733	0.673-0.793
2-Chlorotoluene	22.39	18.88	1.186	ok	1.186	1.126-1.246
Carbon tetrachloride	11.52	9.16	1.258	ok	1.257	1.197-1.317
Cyclohexane	11.70	11.82	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.91	9.16	0.864	ok	0.864	0.804-0.924
1,1-Dichloroethylene	6.46	9.16	0.705	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.93	18.88	0.897	ok	0.897	0.837-0.957
1,2-Dichloroethane	10.31	9.16	1.126	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.50	11.82	1.058	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.85	11.82	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.86	11.82	1.088	ok	1.088	1.028-1.148
Dichlorodifluoromethane	4.00	9.16	0.437	ok	0.437	0.377-0.497
Dibromochloromethane	16.50	18.88	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.67	9.16	0.837	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.95	9.16	0.977	ok	0.977	0.917-1.037
cis-1,3-Dichloropropene	14.21	11.82	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.72	18.88	1.256	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.39	18.88	1.292	ok	1.292	1.232-1.352
p-Dichlorobenzene	23.84	18.88	1.263	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.06	11.82	1.274	ok	1.274	1.214-1.334
Ethanol	5.14	9.16	0.561	ok	0.560	0.500-0.620
Ethylbenzene	19.61	18.88	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.23	9.16	1.008	ok	1.008	0.948-1.068

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1321-IC1321	Q30475.D	06/30/15 21:04	AA	0.2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30476.D	06/30/15 21:53	AA	0.5	GCMSQ	TO-15	
MSQ1321-IC1321	Q30477.D	06/30/15 22:41	AA	2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30478.D	06/30/15 23:29	AA	5	GCMSQ	TO-15	Reporting this level
MSQ1321-ICC1321	Q30479.D	07/01/15 00:17	AA	10	GCMSQ	TO-15	
MSQ1321-IC1321	Q30480.D	07/01/15 01:05	AA	20	GCMSQ	TO-15	
MSQ1321-IC1321	Q30481.D	07/01/15 01:52	AA	30	GCMSQ	TO-15	
MSQ1321-IC1321	Q30482.D	07/01/15 02:40	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.71	18.88	1.203	ok	1.203	1.143-1.263
Freon 113	6.88	9.16	0.751	ok	0.751	0.691-0.811
Freon 114	4.26	9.16	0.465	ok	0.465	0.405-0.525
Heptane	13.33	11.82	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.71	18.88	1.468	ok	1.468	1.408-1.528
Hexane	9.23	9.16	1.008	ok	1.007	0.947-1.067
2-Hexanone	16.27	18.88	0.862	ok	0.862	0.802-0.922
Isopropylbenzene	21.64	18.88	1.146	ok	1.146	1.086-1.206
Isopropyl Alcohol	5.88	9.16	0.642	ok	0.642	0.582-0.702
p-Isopropyltoluene	24.21	18.88	1.282	ok	1.282	1.222-1.342
Methylene chloride	6.58	9.16	0.718	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.38	9.16	0.915	ok	0.916	0.856-0.976
Methyl Isobutyl Ketone	14.27	11.82	1.207	ok	1.207	1.147-1.267
Methyl Tert Butyl Ether	7.98	9.16	0.871	ok	0.871	0.811-0.931
Methylmethacrylate	13.18	11.82	1.115	ok	1.115	1.055-1.175
Naphthalene	27.26	18.88	1.444	ok	1.444	1.384-1.504
Nonane	21.11	18.88	1.118	ok	1.118	1.058-1.178
Pentane	6.15	9.16	0.671	ok	0.671	0.611-0.731
Propylene	3.93	9.16	0.429	ok	0.428	0.368-0.488
Styrene	20.51	18.88	1.086	ok	1.086	1.026-1.146
1,1,1-Trichloroethane	10.66	9.16	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.93	18.88	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.66	18.88	1.094	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.34	11.82	1.298	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.12	18.88	1.436	ok	1.436	1.376-1.496
1,2,4-Trimethylbenzene	23.50	18.88	1.245	ok	1.245	1.185-1.305
1,3,5-Trimethylbenzene	22.84	18.88	1.210	ok	1.210	1.150-1.270
2,2,4-Trimethylpentane	12.92	11.82	1.093	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.54	9.16	0.714	ok	0.714	0.654-0.774
tert-Butylbenzene	23.49	18.88	1.244	ok	1.244	1.184-1.304
Tetrachloroethylene	17.76	18.88	0.941	ok	0.941	0.881-1.001
Tetrahydrofuran	9.85	9.16	1.075	ok	1.076	1.016-1.136
Toluene	15.79	11.82	1.336	ok	1.336	1.276-1.396
Trichloroethylene	12.86	11.82	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.77	9.16	0.630	ok	0.629	0.569-0.689
Vinyl chloride	4.39	9.16	0.479	ok	0.478	0.418-0.538
Vinyl Acetate	8.08	9.16	0.882	ok	0.882	0.822-0.942
m,p-Xylene	19.94	18.88	1.056	ok	1.056	0.996-1.116
o-Xylene	20.68	18.88	1.095	ok	1.095	1.035-1.155

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1321-IC1321	Q30475.D	06/30/15 21:04	AA	0.2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30476.D	06/30/15 21:53	AA	0.5	GCMSQ	TO-15	
MSQ1321-IC1321	Q30477.D	06/30/15 22:41	AA	2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30478.D	06/30/15 23:29	AA	5	GCMSQ	TO-15	Reporting this level
MSQ1321-ICC1321	Q30479.D	07/01/15 00:17	AA	10	GCMSQ	TO-15	
MSQ1321-IC1321	Q30480.D	07/01/15 01:05	AA	20	GCMSQ	TO-15	
MSQ1321-IC1321	Q30481.D	07/01/15 01:52	AA	30	GCMSQ	TO-15	
MSQ1321-IC1321	Q30482.D	07/01/15 02:40	AA	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.16	ok	9.16	8.83-9.49	656047	ok	692699	415619-969779
1,4-Difluorobenzene	11.82	ok	11.82	11.49-12.15	2729596	ok	2925619	1755371-4095867
Chlorobenzene-D5	18.88	ok	18.88	18.55-19.21	1312833	ok	1403832	842299-1965365

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
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Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1321-IC1321	Q30475.D	06/30/15 21:04	AA	0.2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30476.D	06/30/15 21:53	AA	0.5	GCMSQ	TO-15	
MSQ1321-IC1321	Q30477.D	06/30/15 22:41	AA	2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30478.D	06/30/15 23:29	AA	5	GCMSQ	TO-15	
MSQ1321-ICC1321	Q30479.D	07/01/15 00:17	AA	10	GCMSQ	TO-15	Reporting this level
MSQ1321-IC1321	Q30480.D	07/01/15 01:05	AA	20	GCMSQ	TO-15	
MSQ1321-IC1321	Q30481.D	07/01/15 01:52	AA	30	GCMSQ	TO-15	
MSQ1321-IC1321	Q30482.D	07/01/15 02:40	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.16	0.607	ok	0.607	0.547-0.667
Acrolein	5.43	9.16	0.593	ok	0.593	0.533-0.653
Acrylonitrile	6.06	9.16	0.662	ok	0.662	0.602-0.722
1,3-Butadiene	4.52	9.16	0.493	ok	0.492	0.432-0.552
Benzene	11.31	11.82	0.957	ok	0.956	0.896-1.016
Bromodichloromethane	12.80	11.82	1.083	ok	1.083	1.023-1.143
Bromoform	20.00	18.88	1.059	ok	1.059	0.999-1.119
Bromomethane	4.79	9.16	0.523	ok	0.523	0.463-0.583
Bromoethene	5.33	9.16	0.582	ok	0.581	0.521-0.641
n-Butylbenzene	24.91	18.88	1.319	ok	1.319	1.259-1.379
sec-Butylbenzene	23.94	18.88	1.268	ok	1.268	1.208-1.328
Benzyl Chloride	23.70	18.88	1.255	ok	1.255	1.195-1.315
Carbon disulfide	6.94	9.16	0.758	ok	0.757	0.697-0.817
Chlorobenzene	18.96	18.88	1.004	ok	1.004	0.944-1.064
Chloroethane	4.96	9.16	0.541	ok	0.541	0.481-0.601
Chloroform	9.34	9.16	1.020	ok	1.019	0.959-1.079
Chloromethane	4.16	9.16	0.454	ok	0.454	0.394-0.514
3-Chloropropene	6.72	9.16	0.734	ok	0.733	0.673-0.793
2-Chlorotoluene	22.39	18.88	1.186	ok	1.186	1.126-1.246
Carbon tetrachloride	11.52	9.16	1.258	ok	1.257	1.197-1.317
Cyclohexane	11.70	11.82	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.91	9.16	0.864	ok	0.864	0.804-0.924
1,1-Dichloroethylene	6.46	9.16	0.705	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.93	18.88	0.897	ok	0.897	0.837-0.957
1,2-Dichloroethane	10.32	9.16	1.127	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.50	11.82	1.058	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.85	11.82	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.86	11.82	1.088	ok	1.088	1.028-1.148
Dichlorodifluoromethane	4.00	9.16	0.437	ok	0.437	0.377-0.497
Dibromochloromethane	16.50	18.88	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.67	9.16	0.837	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.95	9.16	0.977	ok	0.977	0.917-1.037
cis-1,3-Dichloropropene	14.21	11.82	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.72	18.88	1.256	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.39	18.88	1.292	ok	1.292	1.232-1.352
p-Dichlorobenzene	23.84	18.88	1.263	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.06	11.82	1.274	ok	1.274	1.214-1.334
Ethanol	5.13	9.16	0.560	ok	0.560	0.500-0.620
Ethylbenzene	19.61	18.88	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.23	9.16	1.008	ok	1.008	0.948-1.068

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1321-IC1321	Q30475.D	06/30/15 21:04	AA	0.2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30476.D	06/30/15 21:53	AA	0.5	GCMSQ	TO-15	
MSQ1321-IC1321	Q30477.D	06/30/15 22:41	AA	2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30478.D	06/30/15 23:29	AA	5	GCMSQ	TO-15	
MSQ1321-ICC1321	Q30479.D	07/01/15 00:17	AA	10	GCMSQ	TO-15	Reporting this level
MSQ1321-IC1321	Q30480.D	07/01/15 01:05	AA	20	GCMSQ	TO-15	
MSQ1321-IC1321	Q30481.D	07/01/15 01:52	AA	30	GCMSQ	TO-15	
MSQ1321-IC1321	Q30482.D	07/01/15 02:40	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.71	18.88	1.203	ok	1.203	1.143-1.263
Freon 113	6.88	9.16	0.751	ok	0.751	0.691-0.811
Freon 114	4.26	9.16	0.465	ok	0.465	0.405-0.525
Heptane	13.33	11.82	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.72	18.88	1.468	ok	1.468	1.408-1.528
Hexane	9.23	9.16	1.008	ok	1.007	0.947-1.067
2-Hexanone	16.27	18.88	0.862	ok	0.862	0.802-0.922
Isopropylbenzene	21.64	18.88	1.146	ok	1.146	1.086-1.206
Isopropyl Alcohol	5.88	9.16	0.642	ok	0.642	0.582-0.702
p-Isopropyltoluene	24.21	18.88	1.282	ok	1.282	1.222-1.342
Methylene chloride	6.59	9.16	0.719	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.38	9.16	0.915	ok	0.916	0.856-0.976
Methyl Isobutyl Ketone	14.27	11.82	1.207	ok	1.207	1.147-1.267
Methyl Tert Butyl Ether	7.98	9.16	0.871	ok	0.871	0.811-0.931
Methylmethacrylate	13.18	11.82	1.115	ok	1.115	1.055-1.175
Naphthalene	27.26	18.88	1.444	ok	1.444	1.384-1.504
Nonane	21.11	18.88	1.118	ok	1.118	1.058-1.178
Pentane	6.15	9.16	0.671	ok	0.671	0.611-0.731
Propylene	3.93	9.16	0.429	ok	0.428	0.368-0.488
Styrene	20.51	18.88	1.086	ok	1.086	1.026-1.146
1,1,1-Trichloroethane	10.66	9.16	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.93	18.88	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.67	18.88	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.34	11.82	1.298	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.12	18.88	1.436	ok	1.436	1.376-1.496
1,2,4-Trimethylbenzene	23.50	18.88	1.245	ok	1.245	1.185-1.305
1,3,5-Trimethylbenzene	22.84	18.88	1.210	ok	1.210	1.150-1.270
2,2,4-Trimethylpentane	12.92	11.82	1.093	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.53	9.16	0.713	ok	0.714	0.654-0.774
tert-Butylbenzene	23.49	18.88	1.244	ok	1.244	1.184-1.304
Tetrachloroethylene	17.76	18.88	0.941	ok	0.941	0.881-1.001
Tetrahydrofuran	9.85	9.16	1.075	ok	1.076	1.016-1.136
Toluene	15.80	11.82	1.337	ok	1.336	1.276-1.396
Trichloroethylene	12.86	11.82	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.77	9.16	0.630	ok	0.629	0.569-0.689
Vinyl chloride	4.39	9.16	0.479	ok	0.478	0.418-0.538
Vinyl Acetate	8.08	9.16	0.882	ok	0.882	0.822-0.942
m,p-Xylene	19.94	18.88	1.056	ok	1.056	0.996-1.116
o-Xylene	20.68	18.88	1.095	ok	1.095	1.035-1.155

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1321-IC1321	Q30475.D	06/30/15 21:04	AA	0.2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30476.D	06/30/15 21:53	AA	0.5	GCMSQ	TO-15	
MSQ1321-IC1321	Q30477.D	06/30/15 22:41	AA	2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30478.D	06/30/15 23:29	AA	5	GCMSQ	TO-15	
MSQ1321-ICC1321	Q30479.D	07/01/15 00:17	AA	10	GCMSQ	TO-15	Reporting this level
MSQ1321-IC1321	Q30480.D	07/01/15 01:05	AA	20	GCMSQ	TO-15	
MSQ1321-IC1321	Q30481.D	07/01/15 01:52	AA	30	GCMSQ	TO-15	
MSQ1321-IC1321	Q30482.D	07/01/15 02:40	AA	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.16	ok	9.16	8.83-9.49	677619	ok	692699	415619-969779
1,4-Difluorobenzene	11.82	ok	11.82	11.49-12.15	2775637	ok	2925619	1755371-4095867
Chlorobenzene-D5	18.88	ok	18.88	18.55-19.21	1318890	ok	1403832	842299-1965365

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1321-IC1321	Q30475.D	06/30/15 21:04	AA	0.2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30476.D	06/30/15 21:53	AA	0.5	GCMSQ	TO-15	
MSQ1321-IC1321	Q30477.D	06/30/15 22:41	AA	2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30478.D	06/30/15 23:29	AA	5	GCMSQ	TO-15	
MSQ1321-ICC1321	Q30479.D	07/01/15 00:17	AA	10	GCMSQ	TO-15	
MSQ1321-IC1321	Q30480.D	07/01/15 01:05	AA	20	GCMSQ	TO-15	Reporting this level
MSQ1321-IC1321	Q30481.D	07/01/15 01:52	AA	30	GCMSQ	TO-15	
MSQ1321-IC1321	Q30482.D	07/01/15 02:40	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.16	0.607	ok	0.607	0.547-0.667
Acrolein	5.43	9.16	0.593	ok	0.593	0.533-0.653
Acrylonitrile	6.06	9.16	0.662	ok	0.662	0.602-0.722
1,3-Butadiene	4.51	9.16	0.492	ok	0.492	0.432-0.552
Benzene	11.31	11.83	0.956	ok	0.956	0.896-1.016
Bromodichloromethane	12.80	11.83	1.082	ok	1.083	1.023-1.143
Bromoform	20.00	18.88	1.059	ok	1.059	0.999-1.119
Bromomethane	4.79	9.16	0.523	ok	0.523	0.463-0.583
Bromoethene	5.32	9.16	0.581	ok	0.581	0.521-0.641
n-Butylbenzene	24.91	18.88	1.319	ok	1.319	1.259-1.379
sec-Butylbenzene	23.94	18.88	1.268	ok	1.268	1.208-1.328
Benzyl Chloride	23.71	18.88	1.256	ok	1.255	1.195-1.315
Carbon disulfide	6.93	9.16	0.757	ok	0.757	0.697-0.817
Chlorobenzene	18.96	18.88	1.004	ok	1.004	0.944-1.064
Chloroethane	4.96	9.16	0.541	ok	0.541	0.481-0.601
Chloroform	9.34	9.16	1.020	ok	1.019	0.959-1.079
Chloromethane	4.15	9.16	0.453	ok	0.454	0.394-0.514
3-Chloropropene	6.71	9.16	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.39	18.88	1.186	ok	1.186	1.126-1.246
Carbon tetrachloride	11.52	9.16	1.258	ok	1.257	1.197-1.317
Cyclohexane	11.71	11.83	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.91	9.16	0.864	ok	0.864	0.804-0.924
1,1-Dichloroethylene	6.45	9.16	0.704	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.93	18.88	0.897	ok	0.897	0.837-0.957
1,2-Dichloroethane	10.32	9.16	1.127	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.50	11.83	1.057	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.85	11.83	1.340	ok	1.341	1.281-1.401
1,4-Dioxane	12.86	11.83	1.087	ok	1.088	1.028-1.148
Dichlorodifluoromethane	4.00	9.16	0.437	ok	0.437	0.377-0.497
Dibromochloromethane	16.51	18.88	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.67	9.16	0.837	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.95	9.16	0.977	ok	0.977	0.917-1.037
cis-1,3-Dichloropropene	14.21	11.83	1.201	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.73	18.88	1.257	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.40	18.88	1.292	ok	1.292	1.232-1.352
p-Dichlorobenzene	23.84	18.88	1.263	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.07	11.83	1.274	ok	1.274	1.214-1.334
Ethanol	5.13	9.16	0.560	ok	0.560	0.500-0.620
Ethylbenzene	19.62	18.88	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.23	9.16	1.008	ok	1.008	0.948-1.068

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
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Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1321-IC1321	Q30475.D	06/30/15 21:04	AA	0.2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30476.D	06/30/15 21:53	AA	0.5	GCMSQ	TO-15	
MSQ1321-IC1321	Q30477.D	06/30/15 22:41	AA	2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30478.D	06/30/15 23:29	AA	5	GCMSQ	TO-15	
MSQ1321-ICC1321	Q30479.D	07/01/15 00:17	AA	10	GCMSQ	TO-15	
MSQ1321-IC1321	Q30480.D	07/01/15 01:05	AA	20	GCMSQ	TO-15	Reporting this level
MSQ1321-IC1321	Q30481.D	07/01/15 01:52	AA	30	GCMSQ	TO-15	
MSQ1321-IC1321	Q30482.D	07/01/15 02:40	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.72	18.88	1.203	ok	1.203	1.143-1.263
Freon 113	6.88	9.16	0.751	ok	0.751	0.691-0.811
Freon 114	4.25	9.16	0.464	ok	0.465	0.405-0.525
Heptane	13.34	11.83	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.71	18.88	1.468	ok	1.468	1.408-1.528
Hexane	9.23	9.16	1.008	ok	1.007	0.947-1.067
2-Hexanone	16.27	18.88	0.862	ok	0.862	0.802-0.922
Isopropylbenzene	21.65	18.88	1.147	ok	1.146	1.086-1.206
Isopropyl Alcohol	5.88	9.16	0.642	ok	0.642	0.582-0.702
p-Isopropyltoluene	24.22	18.88	1.283	ok	1.282	1.222-1.342
Methylene chloride	6.58	9.16	0.718	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.38	9.16	0.915	ok	0.916	0.856-0.976
Methyl Isobutyl Ketone	14.27	11.83	1.206	ok	1.207	1.147-1.267
Methyl Tert Butyl Ether	7.97	9.16	0.870	ok	0.871	0.811-0.931
Methylmethacrylate	13.18	11.83	1.114	ok	1.115	1.055-1.175
Naphthalene	27.26	18.88	1.444	ok	1.444	1.384-1.504
Nonane	21.11	18.88	1.118	ok	1.118	1.058-1.178
Pentane	6.14	9.16	0.670	ok	0.671	0.611-0.731
Propylene	3.92	9.16	0.428	ok	0.428	0.368-0.488
Styrene	20.52	18.88	1.087	ok	1.086	1.026-1.146
1,1,1-Trichloroethane	10.66	9.16	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.94	18.88	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.67	18.88	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.34	11.83	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.12	18.88	1.436	ok	1.436	1.376-1.496
1,2,4-Trimethylbenzene	23.50	18.88	1.245	ok	1.245	1.185-1.305
1,3,5-Trimethylbenzene	22.84	18.88	1.210	ok	1.210	1.150-1.270
2,2,4-Trimethylpentane	12.93	11.83	1.093	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.53	9.16	0.713	ok	0.714	0.654-0.774
tert-Butylbenzene	23.49	18.88	1.244	ok	1.244	1.184-1.304
Tetrachloroethylene	17.76	18.88	0.941	ok	0.941	0.881-1.001
Tetrahydrofuran	9.85	9.16	1.075	ok	1.076	1.016-1.136
Toluene	15.80	11.83	1.336	ok	1.336	1.276-1.396
Trichloroethylene	12.86	11.83	1.087	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.76	9.16	0.629	ok	0.629	0.569-0.689
Vinyl chloride	4.37	9.16	0.477	ok	0.478	0.418-0.538
Vinyl Acetate	8.08	9.16	0.882	ok	0.882	0.822-0.942
m,p-Xylene	19.94	18.88	1.056	ok	1.056	0.996-1.116
o-Xylene	20.69	18.88	1.096	ok	1.095	1.035-1.155

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
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Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1321-IC1321	Q30475.D	06/30/15 21:04	AA	0.2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30476.D	06/30/15 21:53	AA	0.5	GCMSQ	TO-15	
MSQ1321-IC1321	Q30477.D	06/30/15 22:41	AA	2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30478.D	06/30/15 23:29	AA	5	GCMSQ	TO-15	
MSQ1321-ICC1321	Q30479.D	07/01/15 00:17	AA	10	GCMSQ	TO-15	
MSQ1321-IC1321	Q30480.D	07/01/15 01:05	AA	20	GCMSQ	TO-15	Reporting this level
MSQ1321-IC1321	Q30481.D	07/01/15 01:52	AA	30	GCMSQ	TO-15	
MSQ1321-IC1321	Q30482.D	07/01/15 02:40	AA	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.16	ok	9.16	8.83-9.49	707409	ok	692699	415619-969779
1,4-Difluorobenzene	11.83	ok	11.82	11.49-12.15	3022718	ok	2925619	1755371-4095867
Chlorobenzene-D5	18.88	ok	18.88	18.55-19.21	1495577	ok	1403832	842299-1965365

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MSQ1321-IC1321	Q30475.D	06/30/15 21:04	AA	0.2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30476.D	06/30/15 21:53	AA	0.5	GCMSQ	TO-15	
MSQ1321-IC1321	Q30477.D	06/30/15 22:41	AA	2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30478.D	06/30/15 23:29	AA	5	GCMSQ	TO-15	
MSQ1321-ICC1321	Q30479.D	07/01/15 00:17	AA	10	GCMSQ	TO-15	
MSQ1321-IC1321	Q30480.D	07/01/15 01:05	AA	20	GCMSQ	TO-15	
MSQ1321-IC1321	Q30481.D	07/01/15 01:52	AA	30	GCMSQ	TO-15	Reporting this level
MSQ1321-IC1321	Q30482.D	07/01/15 02:40	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.17	0.606	ok	0.607	0.547-0.667
Acrolein	5.43	9.17	0.592	ok	0.593	0.533-0.653
Acrylonitrile	6.07	9.17	0.662	ok	0.662	0.602-0.722
1,3-Butadiene	4.51	9.17	0.492	ok	0.492	0.432-0.552
Benzene	11.32	11.83	0.957	ok	0.956	0.896-1.016
Bromodichloromethane	12.80	11.83	1.082	ok	1.083	1.023-1.143
Bromoform	20.01	18.88	1.060	ok	1.059	0.999-1.119
Bromomethane	4.79	9.17	0.522	ok	0.523	0.463-0.583
Bromoethene	5.33	9.17	0.581	ok	0.581	0.521-0.641
n-Butylbenzene	24.91	18.88	1.319	ok	1.319	1.259-1.379
sec-Butylbenzene	23.94	18.88	1.268	ok	1.268	1.208-1.328
Benzyl Chloride	23.71	18.88	1.256	ok	1.255	1.195-1.315
Carbon disulfide	6.94	9.17	0.757	ok	0.757	0.697-0.817
Chlorobenzene	18.97	18.88	1.005	ok	1.004	0.944-1.064
Chloroethane	4.96	9.17	0.541	ok	0.541	0.481-0.601
Chloroform	9.34	9.17	1.019	ok	1.019	0.959-1.079
Chloromethane	4.16	9.17	0.454	ok	0.454	0.394-0.514
3-Chloropropene	6.72	9.17	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.39	18.88	1.186	ok	1.186	1.126-1.246
Carbon tetrachloride	11.52	9.17	1.256	ok	1.257	1.197-1.317
Cyclohexane	11.71	11.83	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.92	9.17	0.864	ok	0.864	0.804-0.924
1,1-Dichloroethylene	6.46	9.17	0.704	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.93	18.88	0.897	ok	0.897	0.837-0.957
1,2-Dichloroethane	10.32	9.17	1.125	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.51	11.83	1.057	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.85	11.83	1.340	ok	1.341	1.281-1.401
1,4-Dioxane	12.86	11.83	1.087	ok	1.088	1.028-1.148
Dichlorodifluoromethane	4.00	9.17	0.436	ok	0.437	0.377-0.497
Dibromochloromethane	16.51	18.88	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.67	9.17	0.836	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.95	9.17	0.976	ok	0.977	0.917-1.037
cis-1,3-Dichloropropene	14.21	11.83	1.201	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.73	18.88	1.257	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.40	18.88	1.292	ok	1.292	1.232-1.352
p-Dichlorobenzene	23.84	18.88	1.263	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.07	11.83	1.274	ok	1.274	1.214-1.334
Ethanol	5.14	9.17	0.561	ok	0.560	0.500-0.620
Ethylbenzene	19.62	18.88	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.23	9.17	1.007	ok	1.008	0.948-1.068

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MSQ1321-IC1321	Q30475.D	06/30/15 21:04	AA	0.2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30476.D	06/30/15 21:53	AA	0.5	GCMSQ	TO-15	
MSQ1321-IC1321	Q30477.D	06/30/15 22:41	AA	2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30478.D	06/30/15 23:29	AA	5	GCMSQ	TO-15	
MSQ1321-ICC1321	Q30479.D	07/01/15 00:17	AA	10	GCMSQ	TO-15	
MSQ1321-IC1321	Q30480.D	07/01/15 01:05	AA	20	GCMSQ	TO-15	
MSQ1321-IC1321	Q30481.D	07/01/15 01:52	AA	30	GCMSQ	TO-15	Reporting this level
MSQ1321-IC1321	Q30482.D	07/01/15 02:40	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.72	18.88	1.203	ok	1.203	1.143-1.263
Freon 113	6.88	9.17	0.750	ok	0.751	0.691-0.811
Freon 114	4.26	9.17	0.465	ok	0.465	0.405-0.525
Heptane	13.34	11.83	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.71	18.88	1.468	ok	1.468	1.408-1.528
Hexane	9.23	9.17	1.007	ok	1.007	0.947-1.067
2-Hexanone	16.27	18.88	0.862	ok	0.862	0.802-0.922
Isopropylbenzene	21.65	18.88	1.147	ok	1.146	1.086-1.206
Isopropyl Alcohol	5.89	9.17	0.642	ok	0.642	0.582-0.702
p-Isopropyltoluene	24.22	18.88	1.283	ok	1.282	1.222-1.342
Methylene chloride	6.59	9.17	0.719	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.39	9.17	0.915	ok	0.916	0.856-0.976
Methyl Isobutyl Ketone	14.27	11.83	1.206	ok	1.207	1.147-1.267
Methyl Tert Butyl Ether	7.98	9.17	0.870	ok	0.871	0.811-0.931
Methylmethacrylate	13.19	11.83	1.115	ok	1.115	1.055-1.175
Naphthalene	27.26	18.88	1.444	ok	1.444	1.384-1.504
Nonane	21.11	18.88	1.118	ok	1.118	1.058-1.178
Pentane	6.15	9.17	0.671	ok	0.671	0.611-0.731
Propylene	3.92	9.17	0.427	ok	0.428	0.368-0.488
Styrene	20.52	18.88	1.087	ok	1.086	1.026-1.146
1,1,1-Trichloroethane	10.67	9.17	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.94	18.88	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.67	18.88	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.34	11.83	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.12	18.88	1.436	ok	1.436	1.376-1.496
1,2,4-Trimethylbenzene	23.51	18.88	1.245	ok	1.245	1.185-1.305
1,3,5-Trimethylbenzene	22.85	18.88	1.210	ok	1.210	1.150-1.270
2,2,4-Trimethylpentane	12.93	11.83	1.093	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.54	9.17	0.713	ok	0.714	0.654-0.774
tert-Butylbenzene	23.50	18.88	1.245	ok	1.244	1.184-1.304
Tetrachloroethylene	17.77	18.88	0.941	ok	0.941	0.881-1.001
Tetrahydrofuran	9.85	9.17	1.074	ok	1.076	1.016-1.136
Toluene	15.80	11.83	1.336	ok	1.336	1.276-1.396
Trichloroethylene	12.87	11.83	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.76	9.17	0.628	ok	0.629	0.569-0.689
Vinyl chloride	4.38	9.17	0.478	ok	0.478	0.418-0.538
Vinyl Acetate	8.09	9.17	0.882	ok	0.882	0.822-0.942
m,p-Xylene	19.94	18.88	1.056	ok	1.056	0.996-1.116
o-Xylene	20.69	18.88	1.096	ok	1.095	1.035-1.155

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MSQ1321-IC1321	Q30475.D	06/30/15 21:04	AA	0.2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30476.D	06/30/15 21:53	AA	0.5	GCMSQ	TO-15	
MSQ1321-IC1321	Q30477.D	06/30/15 22:41	AA	2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30478.D	06/30/15 23:29	AA	5	GCMSQ	TO-15	
MSQ1321-ICC1321	Q30479.D	07/01/15 00:17	AA	10	GCMSQ	TO-15	
MSQ1321-IC1321	Q30480.D	07/01/15 01:05	AA	20	GCMSQ	TO-15	
MSQ1321-IC1321	Q30481.D	07/01/15 01:52	AA	30	GCMSQ	TO-15	Reporting this level
MSQ1321-IC1321	Q30482.D	07/01/15 02:40	AA	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.17	ok	9.16	8.83-9.49	724674	ok	692699	415619-969779
1,4-Difluorobenzene	11.83	ok	11.82	11.49-12.15	3236410	ok	2925619	1755371-4095867
Chlorobenzene-D5	18.88	ok	18.88	18.55-19.21	1619220	ok	1403832	842299-1965365

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1321-IC1321	Q30475.D	06/30/15 21:04	AA	0.2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30476.D	06/30/15 21:53	AA	0.5	GCMSQ	TO-15	
MSQ1321-IC1321	Q30477.D	06/30/15 22:41	AA	2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30478.D	06/30/15 23:29	AA	5	GCMSQ	TO-15	
MSQ1321-ICC1321	Q30479.D	07/01/15 00:17	AA	10	GCMSQ	TO-15	
MSQ1321-IC1321	Q30480.D	07/01/15 01:05	AA	20	GCMSQ	TO-15	
MSQ1321-IC1321	Q30481.D	07/01/15 01:52	AA	30	GCMSQ	TO-15	
MSQ1321-IC1321	Q30482.D	07/01/15 02:40	AA	40	GCMSQ	TO-15	Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.57	9.17	0.607	ok	0.607	0.547-0.667
Acrolein	5.43	9.17	0.592	ok	0.593	0.533-0.653
Acrylonitrile	6.07	9.17	0.662	ok	0.662	0.602-0.722
1,3-Butadiene	4.51	9.17	0.492	ok	0.492	0.432-0.552
Benzene	11.32	11.83	0.957	ok	0.956	0.896-1.016
Bromodichloromethane	12.81	11.83	1.083	ok	1.083	1.023-1.143
Bromoform	20.02	18.89	1.060	ok	1.059	0.999-1.119
Bromomethane	4.79	9.17	0.522	ok	0.523	0.463-0.583
Bromoethene	5.32	9.17	0.580	ok	0.581	0.521-0.641
n-Butylbenzene	24.91	18.89	1.319	ok	1.319	1.259-1.379
sec-Butylbenzene	23.95	18.89	1.268	ok	1.268	1.208-1.328
Benzyl Chloride	23.72	18.89	1.256	ok	1.255	1.195-1.315
Carbon disulfide	6.94	9.17	0.757	ok	0.757	0.697-0.817
Chlorobenzene	18.97	18.89	1.004	ok	1.004	0.944-1.064
Chloroethane	4.96	9.17	0.541	ok	0.541	0.481-0.601
Chloroform	9.34	9.17	1.019	ok	1.019	0.959-1.079
Chloromethane	4.16	9.17	0.454	ok	0.454	0.394-0.514
3-Chloropropene	6.72	9.17	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.40	18.89	1.186	ok	1.186	1.126-1.246
Carbon tetrachloride	11.53	9.17	1.257	ok	1.257	1.197-1.317
Cyclohexane	11.71	11.83	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.92	9.17	0.864	ok	0.864	0.804-0.924
1,1-Dichloroethylene	6.46	9.17	0.704	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.94	18.89	0.897	ok	0.897	0.837-0.957
1,2-Dichloroethane	10.32	9.17	1.125	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.51	11.83	1.057	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.85	11.83	1.340	ok	1.341	1.281-1.401
1,4-Dioxane	12.86	11.83	1.087	ok	1.088	1.028-1.148
Dichlorodifluoromethane	4.00	9.17	0.436	ok	0.437	0.377-0.497
Dibromochloromethane	16.52	18.89	0.875	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.67	9.17	0.836	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.96	9.17	0.977	ok	0.977	0.917-1.037
cis-1,3-Dichloropropene	14.21	11.83	1.201	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.74	18.89	1.257	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.41	18.89	1.292	ok	1.292	1.232-1.352
p-Dichlorobenzene	23.85	18.89	1.263	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.07	11.83	1.274	ok	1.274	1.214-1.334
Ethanol	5.14	9.17	0.561	ok	0.560	0.500-0.620
Ethylbenzene	19.63	18.89	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.24	9.17	1.008	ok	1.008	0.948-1.068

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1321-IC1321	Q30475.D	06/30/15 21:04	AA	0.2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30476.D	06/30/15 21:53	AA	0.5	GCMSQ	TO-15	
MSQ1321-IC1321	Q30477.D	06/30/15 22:41	AA	2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30478.D	06/30/15 23:29	AA	5	GCMSQ	TO-15	
MSQ1321-ICC1321	Q30479.D	07/01/15 00:17	AA	10	GCMSQ	TO-15	
MSQ1321-IC1321	Q30480.D	07/01/15 01:05	AA	20	GCMSQ	TO-15	
MSQ1321-IC1321	Q30481.D	07/01/15 01:52	AA	30	GCMSQ	TO-15	
MSQ1321-IC1321	Q30482.D	07/01/15 02:40	AA	40	GCMSQ	TO-15	Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.72	18.89	1.203	ok	1.203	1.143-1.263
Freon 113	6.88	9.17	0.750	ok	0.751	0.691-0.811
Freon 114	4.26	9.17	0.465	ok	0.465	0.405-0.525
Heptane	13.35	11.83	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.72	18.89	1.467	ok	1.468	1.408-1.528
Hexane	9.23	9.17	1.007	ok	1.007	0.947-1.067
2-Hexanone	16.28	18.89	0.862	ok	0.862	0.802-0.922
Isopropylbenzene	21.66	18.89	1.147	ok	1.146	1.086-1.206
Isopropyl Alcohol	5.88	9.17	0.641	ok	0.642	0.582-0.702
p-Isopropyltoluene	24.22	18.89	1.282	ok	1.282	1.222-1.342
Methylene chloride	6.59	9.17	0.719	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.40	9.17	0.916	ok	0.916	0.856-0.976
Methyl Isobutyl Ketone	14.27	11.83	1.206	ok	1.207	1.147-1.267
Methyl Tert Butyl Ether	7.98	9.17	0.870	ok	0.871	0.811-0.931
Methylmethacrylate	13.19	11.83	1.115	ok	1.115	1.055-1.175
Naphthalene	27.26	18.89	1.443	ok	1.444	1.384-1.504
Nonane	21.11	18.89	1.118	ok	1.118	1.058-1.178
Pentane	6.15	9.17	0.671	ok	0.671	0.611-0.731
Propylene	3.92	9.17	0.427	ok	0.428	0.368-0.488
Styrene	20.52	18.89	1.086	ok	1.086	1.026-1.146
1,1,1-Trichloroethane	10.67	9.17	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.94	18.89	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.68	18.89	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.35	11.83	1.298	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.12	18.89	1.436	ok	1.436	1.376-1.496
1,2,4-Trimethylbenzene	23.52	18.89	1.245	ok	1.245	1.185-1.305
1,3,5-Trimethylbenzene	22.85	18.89	1.210	ok	1.210	1.150-1.270
2,2,4-Trimethylpentane	12.93	11.83	1.093	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.54	9.17	0.713	ok	0.714	0.654-0.774
tert-Butylbenzene	23.50	18.89	1.244	ok	1.244	1.184-1.304
Tetrachloroethylene	17.77	18.89	0.941	ok	0.941	0.881-1.001
Tetrahydrofuran	9.85	9.17	1.074	ok	1.076	1.016-1.136
Toluene	15.80	11.83	1.336	ok	1.336	1.276-1.396
Trichloroethylene	12.87	11.83	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.76	9.17	0.628	ok	0.629	0.569-0.689
Vinyl chloride	4.37	9.17	0.477	ok	0.478	0.418-0.538
Vinyl Acetate	8.09	9.17	0.882	ok	0.882	0.822-0.942
m,p-Xylene	19.95	18.89	1.056	ok	1.056	0.996-1.116
o-Xylene	20.69	18.89	1.095	ok	1.095	1.035-1.155

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1321-IC1321	Q30475.D	06/30/15 21:04	AA	0.2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30476.D	06/30/15 21:53	AA	0.5	GCMSQ	TO-15	
MSQ1321-IC1321	Q30477.D	06/30/15 22:41	AA	2	GCMSQ	TO-15	
MSQ1321-IC1321	Q30478.D	06/30/15 23:29	AA	5	GCMSQ	TO-15	
MSQ1321-ICC1321	Q30479.D	07/01/15 00:17	AA	10	GCMSQ	TO-15	
MSQ1321-IC1321	Q30480.D	07/01/15 01:05	AA	20	GCMSQ	TO-15	
MSQ1321-IC1321	Q30481.D	07/01/15 01:52	AA	30	GCMSQ	TO-15	
MSQ1321-IC1321	Q30482.D	07/01/15 02:40	AA	40	GCMSQ	TO-15	Reporting this level

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.17	ok	9.16	8.83-9.49	717796	ok	692699	415619-969779
1,4-Difluorobenzene	11.83	ok	11.82	11.49-12.15	3079257	ok	2925619	1755371-4095867
Chlorobenzene-D5	18.89	ok	18.88	18.55-19.21	1646256	ok	1403832	842299-1965365

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1338-ICC1338	Q30799.D	07/24/15 18:08	AA	10	GCMSQ	TO-15	Reporting this level
MSQ1338-IC1338	Q30800.D	07/24/15 19:54	AA	40	GCMSQ	TO-15	
MSQ1338-IC1338	Q30801.D	07/24/15 20:43	AA	30	GCMSQ	TO-15	
MSQ1338-IC1338	Q30802.D	07/24/15 21:32	AA	20	GCMSQ	TO-15	
MSQ1338-IC1338	Q30803.D	07/24/15 22:21	AA	5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30804.D	07/24/15 23:09	AA	2	GCMSQ	TO-15	
MSQ1338-IC1338	Q30805.D	07/24/15 23:58	AA	0.5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30806.D	07/25/15 00:46	AA	0.2	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.15	0.608	ok	0.608	0.548-0.668
Acrolein	5.42	9.15	0.592	ok	0.592	0.532-0.652
Acrylonitrile	6.05	9.15	0.661	ok	0.661	0.601-0.721
1,3-Butadiene	4.51	9.15	0.493	ok	0.493	0.433-0.553
Benzene	11.29	11.81	0.956	ok	0.957	0.897-1.017
Bromodichloromethane	12.77	11.81	1.081	ok	1.082	1.022-1.142
Bromoform	19.99	18.86	1.060	ok	1.060	1.000-1.120
Bromomethane	4.79	9.15	0.523	ok	0.523	0.463-0.583
Bromoethene	5.32	9.15	0.581	ok	0.581	0.521-0.641
n-Butylbenzene	24.90	18.86	1.320	ok	1.320	1.260-1.380
sec-Butylbenzene	23.93	18.86	1.269	ok	1.268	1.208-1.328
Benzyl Chloride	23.70	18.86	1.257	ok	1.256	1.196-1.316
Carbon disulfide	6.93	9.15	0.757	ok	0.757	0.697-0.817
Chlorobenzene	18.94	18.86	1.004	ok	1.004	0.944-1.064
Chloroethane	4.96	9.15	0.542	ok	0.542	0.482-0.602
Chloroform	9.32	9.15	1.019	ok	1.018	0.958-1.078
Chloromethane	4.15	9.15	0.454	ok	0.454	0.394-0.514
3-Chloropropene	6.71	9.15	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.38	18.86	1.187	ok	1.186	1.126-1.246
Carbon tetrachloride	11.51	9.15	1.258	ok	1.258	1.198-1.318
Cyclohexane	11.69	11.81	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.90	9.15	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.45	9.15	0.705	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.90	18.86	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.30	9.15	1.126	ok	1.125	1.065-1.185
1,2-Dichloropropane	12.48	11.81	1.057	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.82	11.81	1.340	ok	1.340	1.280-1.400
1,4-Dioxane	12.83	11.81	1.086	ok	1.088	1.028-1.148
Dichlorodifluoromethane	3.99	9.15	0.436	ok	0.436	0.376-0.496
Dibromochloromethane	16.48	18.86	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.66	9.15	0.837	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.94	9.15	0.977	ok	0.977	0.917-1.037
cis-1,3-Dichloropropene	14.18	11.81	1.201	ok	1.201	1.141-1.261
m-Dichlorobenzene	23.72	18.86	1.258	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.39	18.86	1.293	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.83	18.86	1.264	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.04	11.81	1.273	ok	1.274	1.214-1.334
Ethanol	5.06	9.15	0.553	ok	0.553	0.493-0.613
Ethylbenzene	19.60	18.86	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.22	9.15	1.008	ok	1.008	0.948-1.068

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1338-ICC1338	Q30799.D	07/24/15 18:08	AA	10	GCMSQ	TO-15	Reporting this level
MSQ1338-IC1338	Q30800.D	07/24/15 19:54	AA	40	GCMSQ	TO-15	
MSQ1338-IC1338	Q30801.D	07/24/15 20:43	AA	30	GCMSQ	TO-15	
MSQ1338-IC1338	Q30802.D	07/24/15 21:32	AA	20	GCMSQ	TO-15	
MSQ1338-IC1338	Q30803.D	07/24/15 22:21	AA	5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30804.D	07/24/15 23:09	AA	2	GCMSQ	TO-15	
MSQ1338-IC1338	Q30805.D	07/24/15 23:58	AA	0.5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30806.D	07/25/15 00:46	AA	0.2	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.70	18.86	1.204	ok	1.203	1.143-1.263
Freon 113	6.87	9.15	0.751	ok	0.751	0.691-0.811
Freon 114	4.25	9.15	0.464	ok	0.464	0.404-0.524
Heptane	13.32	11.81	1.128	ok	1.129	1.069-1.189
Hexachlorobutadiene	27.70	18.86	1.469	ok	1.468	1.408-1.528
Hexane	9.21	9.15	1.007	ok	1.007	0.947-1.067
2-Hexanone	16.25	18.86	0.862	ok	0.862	0.802-0.922
Isopropylbenzene	21.63	18.86	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.81	9.15	0.635	ok	0.636	0.576-0.696
p-Isopropyltoluene	24.20	18.86	1.283	ok	1.283	1.223-1.343
Methylene chloride	6.57	9.15	0.718	ok	0.718	0.658-0.778
Methyl ethyl ketone	8.37	9.15	0.915	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.25	11.81	1.207	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.96	9.15	0.870	ok	0.871	0.811-0.931
Methylmethacrylate	13.16	11.81	1.114	ok	1.115	1.055-1.175
Naphthalene	27.25	18.86	1.445	ok	1.445	1.385-1.505
Nonane	21.10	18.86	1.119	ok	1.118	1.058-1.178
Pentane	6.14	9.15	0.671	ok	0.671	0.611-0.731
Propylene	3.92	9.15	0.428	ok	0.428	0.368-0.488
Styrene	20.50	18.86	1.087	ok	1.086	1.026-1.146
1,1,1-Trichloroethane	10.65	9.15	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.91	18.86	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.66	18.86	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.31	11.81	1.296	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.12	18.86	1.438	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.49	18.86	1.245	ok	1.245	1.185-1.305
1,3,5-Trimethylbenzene	22.83	18.86	1.210	ok	1.210	1.150-1.270
2,2,4-Trimethylpentane	12.91	11.81	1.093	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.47	9.15	0.707	ok	0.708	0.648-0.768
tert-Butylbenzene	23.48	18.86	1.245	ok	1.245	1.185-1.305
Tetrachloroethylene	17.74	18.86	0.941	ok	0.941	0.881-1.001
Tetrahydrofuran	9.84	9.15	1.075	ok	1.076	1.016-1.136
Toluene	15.78	11.81	1.336	ok	1.337	1.277-1.397
Trichloroethylene	12.85	11.81	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.76	9.15	0.630	ok	0.629	0.569-0.689
Vinyl chloride	4.37	9.15	0.478	ok	0.478	0.418-0.538
Vinyl Acetate	8.07	9.15	0.882	ok	0.882	0.822-0.942
m,p-Xylene	19.92	18.86	1.056	ok	1.056	0.996-1.116
o-Xylene	20.67	18.86	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1338-ICC1338	Q30799.D	07/24/15 18:08	AA	10	GCMSQ	TO-15	Reporting this level
MSQ1338-IC1338	Q30800.D	07/24/15 19:54	AA	40	GCMSQ	TO-15	
MSQ1338-IC1338	Q30801.D	07/24/15 20:43	AA	30	GCMSQ	TO-15	
MSQ1338-IC1338	Q30802.D	07/24/15 21:32	AA	20	GCMSQ	TO-15	
MSQ1338-IC1338	Q30803.D	07/24/15 22:21	AA	5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30804.D	07/24/15 23:09	AA	2	GCMSQ	TO-15	
MSQ1338-IC1338	Q30805.D	07/24/15 23:58	AA	0.5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30806.D	07/25/15 00:46	AA	0.2	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.15	ok	9.15	8.82-9.48	301079	ok	300047	180028-420066
1,4-Difluorobenzene	11.81	ok	11.80	11.47-12.13	1396147	ok	1385149	831089-1939209
Chlorobenzene-D5	18.86	ok	18.86	18.53-19.19	684263	ok	694331	416599-972063

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1338-ICC1338	Q30799.D	07/24/15 18:08	AA	10	GCMSQ	TO-15	
MSQ1338-IC1338	Q30800.D	07/24/15 19:54	AA	40	GCMSQ	TO-15	Reporting this level
MSQ1338-IC1338	Q30801.D	07/24/15 20:43	AA	30	GCMSQ	TO-15	
MSQ1338-IC1338	Q30802.D	07/24/15 21:32	AA	20	GCMSQ	TO-15	
MSQ1338-IC1338	Q30803.D	07/24/15 22:21	AA	5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30804.D	07/24/15 23:09	AA	2	GCMSQ	TO-15	
MSQ1338-IC1338	Q30805.D	07/24/15 23:58	AA	0.5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30806.D	07/25/15 00:46	AA	0.2	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.55	9.15	0.607	ok	0.608	0.548-0.668
Acrolein	5.42	9.15	0.592	ok	0.592	0.532-0.652
Acrylonitrile	6.05	9.15	0.661	ok	0.661	0.601-0.721
1,3-Butadiene	4.51	9.15	0.493	ok	0.493	0.433-0.553
Benzene	11.30	11.81	0.957	ok	0.957	0.897-1.017
Bromodichloromethane	12.78	11.81	1.082	ok	1.082	1.022-1.142
Bromoform	20.00	18.87	1.060	ok	1.060	1.000-1.120
Bromomethane	4.78	9.15	0.522	ok	0.523	0.463-0.583
Bromoethene	5.32	9.15	0.581	ok	0.581	0.521-0.641
n-Butylbenzene	24.91	18.87	1.320	ok	1.320	1.260-1.380
sec-Butylbenzene	23.94	18.87	1.269	ok	1.268	1.208-1.328
Benzyl Chloride	23.71	18.87	1.256	ok	1.256	1.196-1.316
Carbon disulfide	6.92	9.15	0.756	ok	0.757	0.697-0.817
Chlorobenzene	18.95	18.87	1.004	ok	1.004	0.944-1.064
Chloroethane	4.95	9.15	0.541	ok	0.542	0.482-0.602
Chloroform	9.32	9.15	1.019	ok	1.018	0.958-1.078
Chloromethane	4.15	9.15	0.454	ok	0.454	0.394-0.514
3-Chloropropene	6.71	9.15	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.39	18.87	1.187	ok	1.186	1.126-1.246
Carbon tetrachloride	11.51	9.15	1.258	ok	1.258	1.198-1.318
Cyclohexane	11.69	11.81	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.90	9.15	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.44	9.15	0.704	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.91	18.87	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.30	9.15	1.126	ok	1.125	1.065-1.185
1,2-Dichloropropane	12.49	11.81	1.058	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.83	11.81	1.340	ok	1.340	1.280-1.400
1,4-Dioxane	12.83	11.81	1.086	ok	1.088	1.028-1.148
Dichlorodifluoromethane	3.99	9.15	0.436	ok	0.436	0.376-0.496
Dibromochloromethane	16.49	18.87	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.66	9.15	0.837	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.94	9.15	0.977	ok	0.977	0.917-1.037
cis-1,3-Dichloropropene	14.19	11.81	1.202	ok	1.201	1.141-1.261
m-Dichlorobenzene	23.73	18.87	1.258	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.39	18.87	1.293	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.84	18.87	1.263	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.04	11.81	1.273	ok	1.274	1.214-1.334
Ethanol	5.06	9.15	0.553	ok	0.553	0.493-0.613
Ethylbenzene	19.61	18.87	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.22	9.15	1.008	ok	1.008	0.948-1.068

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1338-ICC1338	Q30799.D	07/24/15 18:08	AA	10	GCMSQ	TO-15	
MSQ1338-IC1338	Q30800.D	07/24/15 19:54	AA	40	GCMSQ	TO-15	Reporting this level
MSQ1338-IC1338	Q30801.D	07/24/15 20:43	AA	30	GCMSQ	TO-15	
MSQ1338-IC1338	Q30802.D	07/24/15 21:32	AA	20	GCMSQ	TO-15	
MSQ1338-IC1338	Q30803.D	07/24/15 22:21	AA	5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30804.D	07/24/15 23:09	AA	2	GCMSQ	TO-15	
MSQ1338-IC1338	Q30805.D	07/24/15 23:58	AA	0.5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30806.D	07/25/15 00:46	AA	0.2	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.70	18.87	1.203	ok	1.203	1.143-1.263
Freon 113	6.87	9.15	0.751	ok	0.751	0.691-0.811
Freon 114	4.24	9.15	0.463	ok	0.464	0.404-0.524
Heptane	13.32	11.81	1.128	ok	1.129	1.069-1.189
Hexachlorobutadiene	27.70	18.87	1.468	ok	1.468	1.408-1.528
Hexane	9.21	9.15	1.007	ok	1.007	0.947-1.067
2-Hexanone	16.25	18.87	0.861	ok	0.862	0.802-0.922
Isopropylbenzene	21.64	18.87	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.81	9.15	0.635	ok	0.636	0.576-0.696
p-Isopropyltoluene	24.21	18.87	1.283	ok	1.283	1.223-1.343
Methylene chloride	6.57	9.15	0.718	ok	0.718	0.658-0.778
Methyl ethyl ketone	8.37	9.15	0.915	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.25	11.81	1.207	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.96	9.15	0.870	ok	0.871	0.811-0.931
Methylmethacrylate	13.16	11.81	1.114	ok	1.115	1.055-1.175
Naphthalene	27.25	18.87	1.444	ok	1.445	1.385-1.505
Nonane	21.10	18.87	1.118	ok	1.118	1.058-1.178
Pentane	6.13	9.15	0.670	ok	0.671	0.611-0.731
Propylene	3.92	9.15	0.428	ok	0.428	0.368-0.488
Styrene	20.50	18.87	1.086	ok	1.086	1.026-1.146
1,1,1-Trichloroethane	10.65	9.15	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.92	18.87	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.66	18.87	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.32	11.81	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.12	18.87	1.437	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.50	18.87	1.245	ok	1.245	1.185-1.305
1,3,5-Trimethylbenzene	22.84	18.87	1.210	ok	1.210	1.150-1.270
2,2,4-Trimethylpentane	12.91	11.81	1.093	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.46	9.15	0.706	ok	0.708	0.648-0.768
tert-Butylbenzene	23.49	18.87	1.245	ok	1.245	1.185-1.305
Tetrachloroethylene	17.75	18.87	0.941	ok	0.941	0.881-1.001
Tetrahydrofuran	9.83	9.15	1.074	ok	1.076	1.016-1.136
Toluene	15.79	11.81	1.337	ok	1.337	1.277-1.397
Trichloroethylene	12.85	11.81	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.75	9.15	0.628	ok	0.629	0.569-0.689
Vinyl chloride	4.37	9.15	0.478	ok	0.478	0.418-0.538
Vinyl Acetate	8.07	9.15	0.882	ok	0.882	0.822-0.942
m,p-Xylene	19.94	18.87	1.057	ok	1.056	0.996-1.116
o-Xylene	20.68	18.87	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1338-ICC1338	Q30799.D	07/24/15 18:08	AA	10	GCMSQ	TO-15	
MSQ1338-IC1338	Q30800.D	07/24/15 19:54	AA	40	GCMSQ	TO-15	Reporting this level
MSQ1338-IC1338	Q30801.D	07/24/15 20:43	AA	30	GCMSQ	TO-15	
MSQ1338-IC1338	Q30802.D	07/24/15 21:32	AA	20	GCMSQ	TO-15	
MSQ1338-IC1338	Q30803.D	07/24/15 22:21	AA	5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30804.D	07/24/15 23:09	AA	2	GCMSQ	TO-15	
MSQ1338-IC1338	Q30805.D	07/24/15 23:58	AA	0.5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30806.D	07/25/15 00:46	AA	0.2	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.15	ok	9.15	8.82-9.48	326942	ok	300047	180028-420066
1,4-Difluorobenzene	11.81	ok	11.80	11.47-12.13	1496571	ok	1385149	831089-1939209
Chlorobenzene-D5	18.87	ok	18.86	18.53-19.19	827817	ok	694331	416599-972063

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1338-ICC1338	Q30799.D	07/24/15 18:08	AA	10	GCMSQ	TO-15	
MSQ1338-IC1338	Q30800.D	07/24/15 19:54	AA	40	GCMSQ	TO-15	
MSQ1338-IC1338	Q30801.D	07/24/15 20:43	AA	30	GCMSQ	TO-15	Reporting this level
MSQ1338-IC1338	Q30802.D	07/24/15 21:32	AA	20	GCMSQ	TO-15	
MSQ1338-IC1338	Q30803.D	07/24/15 22:21	AA	5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30804.D	07/24/15 23:09	AA	2	GCMSQ	TO-15	
MSQ1338-IC1338	Q30805.D	07/24/15 23:58	AA	0.5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30806.D	07/25/15 00:46	AA	0.2	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.16	0.607	ok	0.608	0.548-0.668
Acrolein	5.42	9.16	0.592	ok	0.592	0.532-0.652
Acrylonitrile	6.06	9.16	0.662	ok	0.661	0.601-0.721
1,3-Butadiene	4.51	9.16	0.492	ok	0.493	0.433-0.553
Benzene	11.30	11.81	0.957	ok	0.957	0.897-1.017
Bromodichloromethane	12.78	11.81	1.082	ok	1.082	1.022-1.142
Bromoform	20.00	18.87	1.060	ok	1.060	1.000-1.120
Bromomethane	4.79	9.16	0.523	ok	0.523	0.463-0.583
Bromoethene	5.32	9.16	0.581	ok	0.581	0.521-0.641
n-Butylbenzene	24.90	18.87	1.320	ok	1.320	1.260-1.380
sec-Butylbenzene	23.94	18.87	1.269	ok	1.268	1.208-1.328
Benzyl Chloride	23.70	18.87	1.256	ok	1.256	1.196-1.316
Carbon disulfide	6.93	9.16	0.757	ok	0.757	0.697-0.817
Chlorobenzene	18.95	18.87	1.004	ok	1.004	0.944-1.064
Chloroethane	4.96	9.16	0.541	ok	0.542	0.482-0.602
Chloroform	9.32	9.16	1.017	ok	1.018	0.958-1.078
Chloromethane	4.15	9.16	0.453	ok	0.454	0.394-0.514
3-Chloropropene	6.71	9.16	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.38	18.87	1.186	ok	1.186	1.126-1.246
Carbon tetrachloride	11.51	9.16	1.257	ok	1.258	1.198-1.318
Cyclohexane	11.69	11.81	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.90	9.16	0.862	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.45	9.16	0.704	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.91	18.87	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.30	9.16	1.124	ok	1.125	1.065-1.185
1,2-Dichloropropane	12.49	11.81	1.058	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.83	11.81	1.340	ok	1.340	1.280-1.400
1,4-Dioxane	12.83	11.81	1.086	ok	1.088	1.028-1.148
Dichlorodifluoromethane	3.99	9.16	0.436	ok	0.436	0.376-0.496
Dibromochloromethane	16.49	18.87	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.66	9.16	0.836	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.94	9.16	0.976	ok	0.977	0.917-1.037
cis-1,3-Dichloropropene	14.19	11.81	1.202	ok	1.201	1.141-1.261
m-Dichlorobenzene	23.72	18.87	1.257	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.39	18.87	1.293	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.84	18.87	1.263	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.04	11.81	1.273	ok	1.274	1.214-1.334
Ethanol	5.06	9.16	0.552	ok	0.553	0.493-0.613
Ethylbenzene	19.61	18.87	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.22	9.16	1.007	ok	1.008	0.948-1.068

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1338-ICC1338	Q30799.D	07/24/15 18:08	AA	10	GCMSQ	TO-15	
MSQ1338-IC1338	Q30800.D	07/24/15 19:54	AA	40	GCMSQ	TO-15	
MSQ1338-IC1338	Q30801.D	07/24/15 20:43	AA	30	GCMSQ	TO-15	Reporting this level
MSQ1338-IC1338	Q30802.D	07/24/15 21:32	AA	20	GCMSQ	TO-15	
MSQ1338-IC1338	Q30803.D	07/24/15 22:21	AA	5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30804.D	07/24/15 23:09	AA	2	GCMSQ	TO-15	
MSQ1338-IC1338	Q30805.D	07/24/15 23:58	AA	0.5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30806.D	07/25/15 00:46	AA	0.2	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.70	18.87	1.203	ok	1.203	1.143-1.263
Freon 113	6.87	9.16	0.750	ok	0.751	0.691-0.811
Freon 114	4.25	9.16	0.464	ok	0.464	0.404-0.524
Heptane	13.33	11.81	1.129	ok	1.129	1.069-1.189
Hexachlorobutadiene	27.70	18.87	1.468	ok	1.468	1.408-1.528
Hexane	9.22	9.16	1.007	ok	1.007	0.947-1.067
2-Hexanone	16.25	18.87	0.861	ok	0.862	0.802-0.922
Isopropylbenzene	21.64	18.87	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.81	9.16	0.634	ok	0.636	0.576-0.696
p-Isopropyltoluene	24.21	18.87	1.283	ok	1.283	1.223-1.343
Methylene chloride	6.57	9.16	0.717	ok	0.718	0.658-0.778
Methyl ethyl ketone	8.37	9.16	0.914	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.25	11.81	1.207	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.96	9.16	0.869	ok	0.871	0.811-0.931
Methylmethacrylate	13.16	11.81	1.114	ok	1.115	1.055-1.175
Naphthalene	27.25	18.87	1.444	ok	1.445	1.385-1.505
Nonane	21.10	18.87	1.118	ok	1.118	1.058-1.178
Pentane	6.14	9.16	0.670	ok	0.671	0.611-0.731
Propylene	3.92	9.16	0.428	ok	0.428	0.368-0.488
Styrene	20.50	18.87	1.086	ok	1.086	1.026-1.146
1,1,1-Trichloroethane	10.65	9.16	1.163	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.93	18.87	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.66	18.87	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.32	11.81	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.12	18.87	1.437	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.50	18.87	1.245	ok	1.245	1.185-1.305
1,3,5-Trimethylbenzene	22.84	18.87	1.210	ok	1.210	1.150-1.270
2,2,4-Trimethylpentane	12.91	11.81	1.093	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.47	9.16	0.706	ok	0.708	0.648-0.768
tert-Butylbenzene	23.49	18.87	1.245	ok	1.245	1.185-1.305
Tetrachloroethylene	17.75	18.87	0.941	ok	0.941	0.881-1.001
Tetrahydrofuran	9.84	9.16	1.074	ok	1.076	1.016-1.136
Toluene	15.79	11.81	1.337	ok	1.337	1.277-1.397
Trichloroethylene	12.85	11.81	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.76	9.16	0.629	ok	0.629	0.569-0.689
Vinyl chloride	4.37	9.16	0.477	ok	0.478	0.418-0.538
Vinyl Acetate	8.07	9.16	0.881	ok	0.882	0.822-0.942
m,p-Xylene	19.93	18.87	1.056	ok	1.056	0.996-1.116
o-Xylene	20.68	18.87	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1338-ICC1338	Q30799.D	07/24/15 18:08	AA	10	GCMSQ	TO-15	
MSQ1338-IC1338	Q30800.D	07/24/15 19:54	AA	40	GCMSQ	TO-15	
MSQ1338-IC1338	Q30801.D	07/24/15 20:43	AA	30	GCMSQ	TO-15	Reporting this level
MSQ1338-IC1338	Q30802.D	07/24/15 21:32	AA	20	GCMSQ	TO-15	
MSQ1338-IC1338	Q30803.D	07/24/15 22:21	AA	5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30804.D	07/24/15 23:09	AA	2	GCMSQ	TO-15	
MSQ1338-IC1338	Q30805.D	07/24/15 23:58	AA	0.5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30806.D	07/25/15 00:46	AA	0.2	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.16	ok	9.15	8.82-9.48	313069	ok	300047	180028-420066
1,4-Difluorobenzene	11.81	ok	11.80	11.47-12.13	1438900	ok	1385149	831089-1939209
Chlorobenzene-D5	18.87	ok	18.86	18.53-19.19	757874	ok	694331	416599-972063

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1338-ICC1338	Q30799.D	07/24/15 18:08	AA	10	GCMSQ	TO-15	
MSQ1338-IC1338	Q30800.D	07/24/15 19:54	AA	40	GCMSQ	TO-15	
MSQ1338-IC1338	Q30801.D	07/24/15 20:43	AA	30	GCMSQ	TO-15	
MSQ1338-IC1338	Q30802.D	07/24/15 21:32	AA	20	GCMSQ	TO-15	Reporting this level
MSQ1338-IC1338	Q30803.D	07/24/15 22:21	AA	5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30804.D	07/24/15 23:09	AA	2	GCMSQ	TO-15	
MSQ1338-IC1338	Q30805.D	07/24/15 23:58	AA	0.5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30806.D	07/25/15 00:46	AA	0.2	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.15	0.608	ok	0.608	0.548-0.668
Acrolein	5.43	9.15	0.593	ok	0.592	0.532-0.652
Acrylonitrile	6.06	9.15	0.662	ok	0.661	0.601-0.721
1,3-Butadiene	4.51	9.15	0.493	ok	0.493	0.433-0.553
Benzene	11.30	11.81	0.957	ok	0.957	0.897-1.017
Bromodichloromethane	12.78	11.81	1.082	ok	1.082	1.022-1.142
Bromoform	19.99	18.87	1.059	ok	1.060	1.000-1.120
Bromomethane	4.79	9.15	0.523	ok	0.523	0.463-0.583
Bromoethene	5.32	9.15	0.581	ok	0.581	0.521-0.641
n-Butylbenzene	24.90	18.87	1.320	ok	1.320	1.260-1.380
sec-Butylbenzene	23.93	18.87	1.268	ok	1.268	1.208-1.328
Benzyl Chloride	23.70	18.87	1.256	ok	1.256	1.196-1.316
Carbon disulfide	6.93	9.15	0.757	ok	0.757	0.697-0.817
Chlorobenzene	18.94	18.87	1.004	ok	1.004	0.944-1.064
Chloroethane	4.96	9.15	0.542	ok	0.542	0.482-0.602
Chloroform	9.32	9.15	1.019	ok	1.018	0.958-1.078
Chloromethane	4.15	9.15	0.454	ok	0.454	0.394-0.514
3-Chloropropene	6.71	9.15	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.38	18.87	1.186	ok	1.186	1.126-1.246
Carbon tetrachloride	11.51	9.15	1.258	ok	1.258	1.198-1.318
Cyclohexane	11.69	11.81	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.90	9.15	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.45	9.15	0.705	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.91	18.87	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.30	9.15	1.126	ok	1.125	1.065-1.185
1,2-Dichloropropane	12.49	11.81	1.058	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.83	11.81	1.340	ok	1.340	1.280-1.400
1,4-Dioxane	12.83	11.81	1.086	ok	1.088	1.028-1.148
Dichlorodifluoromethane	3.99	9.15	0.436	ok	0.436	0.376-0.496
Dibromochloromethane	16.49	18.87	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.66	9.15	0.837	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.94	9.15	0.977	ok	0.977	0.917-1.037
cis-1,3-Dichloropropene	14.19	11.81	1.202	ok	1.201	1.141-1.261
m-Dichlorobenzene	23.72	18.87	1.257	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.39	18.87	1.293	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.83	18.87	1.263	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.04	11.81	1.273	ok	1.274	1.214-1.334
Ethanol	5.06	9.15	0.553	ok	0.553	0.493-0.613
Ethylbenzene	19.60	18.87	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.22	9.15	1.008	ok	1.008	0.948-1.068

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1338-ICC1338	Q30799.D	07/24/15 18:08	AA	10	GCMSQ	TO-15	
MSQ1338-IC1338	Q30800.D	07/24/15 19:54	AA	40	GCMSQ	TO-15	
MSQ1338-IC1338	Q30801.D	07/24/15 20:43	AA	30	GCMSQ	TO-15	
MSQ1338-IC1338	Q30802.D	07/24/15 21:32	AA	20	GCMSQ	TO-15	Reporting this level
MSQ1338-IC1338	Q30803.D	07/24/15 22:21	AA	5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30804.D	07/24/15 23:09	AA	2	GCMSQ	TO-15	
MSQ1338-IC1338	Q30805.D	07/24/15 23:58	AA	0.5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30806.D	07/25/15 00:46	AA	0.2	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.70	18.87	1.203	ok	1.203	1.143-1.263
Freon 113	6.87	9.15	0.751	ok	0.751	0.691-0.811
Freon 114	4.25	9.15	0.464	ok	0.464	0.404-0.524
Heptane	13.33	11.81	1.129	ok	1.129	1.069-1.189
Hexachlorobutadiene	27.70	18.87	1.468	ok	1.468	1.408-1.528
Hexane	9.22	9.15	1.008	ok	1.007	0.947-1.067
2-Hexanone	16.25	18.87	0.861	ok	0.862	0.802-0.922
Isopropylbenzene	21.64	18.87	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.81	9.15	0.635	ok	0.636	0.576-0.696
p-Isopropyltoluene	24.20	18.87	1.282	ok	1.283	1.223-1.343
Methylene chloride	6.57	9.15	0.718	ok	0.718	0.658-0.778
Methyl ethyl ketone	8.37	9.15	0.915	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.25	11.81	1.207	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.96	9.15	0.870	ok	0.871	0.811-0.931
Methylmethacrylate	13.16	11.81	1.114	ok	1.115	1.055-1.175
Naphthalene	27.25	18.87	1.444	ok	1.445	1.385-1.505
Nonane	21.10	18.87	1.118	ok	1.118	1.058-1.178
Pentane	6.14	9.15	0.671	ok	0.671	0.611-0.731
Propylene	3.92	9.15	0.428	ok	0.428	0.368-0.488
Styrene	20.50	18.87	1.086	ok	1.086	1.026-1.146
1,1,1-Trichloroethane	10.65	9.15	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.92	18.87	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.66	18.87	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.32	11.81	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.12	18.87	1.437	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.50	18.87	1.245	ok	1.245	1.185-1.305
1,3,5-Trimethylbenzene	22.83	18.87	1.210	ok	1.210	1.150-1.270
2,2,4-Trimethylpentane	12.91	11.81	1.093	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.47	9.15	0.707	ok	0.708	0.648-0.768
tert-Butylbenzene	23.49	18.87	1.245	ok	1.245	1.185-1.305
Tetrachloroethylene	17.75	18.87	0.941	ok	0.941	0.881-1.001
Tetrahydrofuran	9.84	9.15	1.075	ok	1.076	1.016-1.136
Toluene	15.79	11.81	1.337	ok	1.337	1.277-1.397
Trichloroethylene	12.85	11.81	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.76	9.15	0.630	ok	0.629	0.569-0.689
Vinyl chloride	4.37	9.15	0.478	ok	0.478	0.418-0.538
Vinyl Acetate	8.07	9.15	0.882	ok	0.882	0.822-0.942
m,p-Xylene	19.93	18.87	1.056	ok	1.056	0.996-1.116
o-Xylene	20.67	18.87	1.095	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1338-ICC1338	Q30799.D	07/24/15 18:08	AA	10	GCMSQ	TO-15	
MSQ1338-IC1338	Q30800.D	07/24/15 19:54	AA	40	GCMSQ	TO-15	
MSQ1338-IC1338	Q30801.D	07/24/15 20:43	AA	30	GCMSQ	TO-15	
MSQ1338-IC1338	Q30802.D	07/24/15 21:32	AA	20	GCMSQ	TO-15	Reporting this level
MSQ1338-IC1338	Q30803.D	07/24/15 22:21	AA	5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30804.D	07/24/15 23:09	AA	2	GCMSQ	TO-15	
MSQ1338-IC1338	Q30805.D	07/24/15 23:58	AA	0.5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30806.D	07/25/15 00:46	AA	0.2	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.15	ok	9.15	8.82-9.48	270738	ok	300047	180028-420066
1,4-Difluorobenzene	11.81	ok	11.80	11.47-12.13	1187194	ok	1385149	831089-1939209
Chlorobenzene-D5	18.87	ok	18.86	18.53-19.19	647637	ok	694331	416599-972063

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1338-ICC1338	Q30799.D	07/24/15 18:08	AA	10	GCMSQ	TO-15	
MSQ1338-IC1338	Q30800.D	07/24/15 19:54	AA	40	GCMSQ	TO-15	
MSQ1338-IC1338	Q30801.D	07/24/15 20:43	AA	30	GCMSQ	TO-15	
MSQ1338-IC1338	Q30802.D	07/24/15 21:32	AA	20	GCMSQ	TO-15	
MSQ1338-IC1338	Q30803.D	07/24/15 22:21	AA	5	GCMSQ	TO-15	Reporting this level
MSQ1338-IC1338	Q30804.D	07/24/15 23:09	AA	2	GCMSQ	TO-15	
MSQ1338-IC1338	Q30805.D	07/24/15 23:58	AA	0.5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30806.D	07/25/15 00:46	AA	0.2	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.15	0.608	ok	0.608	0.548-0.668
Acrolein	5.42	9.15	0.592	ok	0.592	0.532-0.652
Acrylonitrile	6.05	9.15	0.661	ok	0.661	0.601-0.721
1,3-Butadiene	4.51	9.15	0.493	ok	0.493	0.433-0.553
Benzene	11.29	11.80	0.957	ok	0.957	0.897-1.017
Bromodichloromethane	12.77	11.80	1.082	ok	1.082	1.022-1.142
Bromoform	19.98	18.86	1.059	ok	1.060	1.000-1.120
Bromomethane	4.79	9.15	0.523	ok	0.523	0.463-0.583
Bromoethene	5.32	9.15	0.581	ok	0.581	0.521-0.641
n-Butylbenzene	24.90	18.86	1.320	ok	1.320	1.260-1.380
sec-Butylbenzene	23.92	18.86	1.268	ok	1.268	1.208-1.328
Benzyl Chloride	23.69	18.86	1.256	ok	1.256	1.196-1.316
Carbon disulfide	6.93	9.15	0.757	ok	0.757	0.697-0.817
Chlorobenzene	18.94	18.86	1.004	ok	1.004	0.944-1.064
Chloroethane	4.96	9.15	0.542	ok	0.542	0.482-0.602
Chloroform	9.31	9.15	1.017	ok	1.018	0.958-1.078
Chloromethane	4.15	9.15	0.454	ok	0.454	0.394-0.514
3-Chloropropene	6.71	9.15	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.38	18.86	1.187	ok	1.186	1.126-1.246
Carbon tetrachloride	11.51	9.15	1.258	ok	1.258	1.198-1.318
Cyclohexane	11.69	11.80	0.991	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.90	9.15	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.45	9.15	0.705	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.90	18.86	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.30	9.15	1.126	ok	1.125	1.065-1.185
1,2-Dichloropropane	12.48	11.80	1.058	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.82	11.80	1.341	ok	1.340	1.280-1.400
1,4-Dioxane	12.84	11.80	1.088	ok	1.088	1.028-1.148
Dichlorodifluoromethane	4.00	9.15	0.437	ok	0.436	0.376-0.496
Dibromochloromethane	16.47	18.86	0.873	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.66	9.15	0.837	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.93	9.15	0.976	ok	0.977	0.917-1.037
cis-1,3-Dichloropropene	14.18	11.80	1.202	ok	1.201	1.141-1.261
m-Dichlorobenzene	23.71	18.86	1.257	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.38	18.86	1.293	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.83	18.86	1.264	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.04	11.80	1.275	ok	1.274	1.214-1.334
Ethanol	5.06	9.15	0.553	ok	0.553	0.493-0.613
Ethylbenzene	19.60	18.86	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.22	9.15	1.008	ok	1.008	0.948-1.068

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1338-ICC1338	Q30799.D	07/24/15 18:08	AA	10	GCMSQ	TO-15	
MSQ1338-IC1338	Q30800.D	07/24/15 19:54	AA	40	GCMSQ	TO-15	
MSQ1338-IC1338	Q30801.D	07/24/15 20:43	AA	30	GCMSQ	TO-15	
MSQ1338-IC1338	Q30802.D	07/24/15 21:32	AA	20	GCMSQ	TO-15	
MSQ1338-IC1338	Q30803.D	07/24/15 22:21	AA	5	GCMSQ	TO-15	Reporting this level
MSQ1338-IC1338	Q30804.D	07/24/15 23:09	AA	2	GCMSQ	TO-15	
MSQ1338-IC1338	Q30805.D	07/24/15 23:58	AA	0.5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30806.D	07/25/15 00:46	AA	0.2	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.70	18.86	1.204	ok	1.203	1.143-1.263
Freon 113	6.87	9.15	0.751	ok	0.751	0.691-0.811
Freon 114	4.25	9.15	0.464	ok	0.464	0.404-0.524
Heptane	13.32	11.80	1.129	ok	1.129	1.069-1.189
Hexachlorobutadiene	27.70	18.86	1.469	ok	1.468	1.408-1.528
Hexane	9.21	9.15	1.007	ok	1.007	0.947-1.067
2-Hexanone	16.26	18.86	0.862	ok	0.862	0.802-0.922
Isopropylbenzene	21.63	18.86	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.81	9.15	0.635	ok	0.636	0.576-0.696
p-Isopropyltoluene	24.20	18.86	1.283	ok	1.283	1.223-1.343
Methylene chloride	6.57	9.15	0.718	ok	0.718	0.658-0.778
Methyl ethyl ketone	8.37	9.15	0.915	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.26	11.80	1.208	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.97	9.15	0.871	ok	0.871	0.811-0.931
Methylmethacrylate	13.16	11.80	1.115	ok	1.115	1.055-1.175
Naphthalene	27.25	18.86	1.445	ok	1.445	1.385-1.505
Nonane	21.10	18.86	1.119	ok	1.118	1.058-1.178
Pentane	6.14	9.15	0.671	ok	0.671	0.611-0.731
Propylene	3.92	9.15	0.428	ok	0.428	0.368-0.488
Styrene	20.49	18.86	1.086	ok	1.086	1.026-1.146
1,1,1-Trichloroethane	10.65	9.15	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.91	18.86	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.65	18.86	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.31	11.80	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.12	18.86	1.438	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.49	18.86	1.245	ok	1.245	1.185-1.305
1,3,5-Trimethylbenzene	22.83	18.86	1.210	ok	1.210	1.150-1.270
2,2,4-Trimethylpentane	12.90	11.80	1.093	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.48	9.15	0.708	ok	0.708	0.648-0.768
tert-Butylbenzene	23.48	18.86	1.245	ok	1.245	1.185-1.305
Tetrachloroethylene	17.74	18.86	0.941	ok	0.941	0.881-1.001
Tetrahydrofuran	9.85	9.15	1.077	ok	1.076	1.016-1.136
Toluene	15.77	11.80	1.336	ok	1.337	1.277-1.397
Trichloroethylene	12.84	11.80	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.76	9.15	0.630	ok	0.629	0.569-0.689
Vinyl chloride	4.38	9.15	0.479	ok	0.478	0.418-0.538
Vinyl Acetate	8.07	9.15	0.882	ok	0.882	0.822-0.942
m,p-Xylene	19.92	18.86	1.056	ok	1.056	0.996-1.116
o-Xylene	20.66	18.86	1.095	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1338-ICC1338	Q30799.D	07/24/15 18:08	AA	10	GCMSQ	TO-15	
MSQ1338-IC1338	Q30800.D	07/24/15 19:54	AA	40	GCMSQ	TO-15	
MSQ1338-IC1338	Q30801.D	07/24/15 20:43	AA	30	GCMSQ	TO-15	
MSQ1338-IC1338	Q30802.D	07/24/15 21:32	AA	20	GCMSQ	TO-15	
MSQ1338-IC1338	Q30803.D	07/24/15 22:21	AA	5	GCMSQ	TO-15	Reporting this level
MSQ1338-IC1338	Q30804.D	07/24/15 23:09	AA	2	GCMSQ	TO-15	
MSQ1338-IC1338	Q30805.D	07/24/15 23:58	AA	0.5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30806.D	07/25/15 00:46	AA	0.2	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.15	ok	9.15	8.82-9.48	280421	ok	300047	180028-420066
1,4-Difluorobenzene	11.80	ok	11.80	11.47-12.13	1296096	ok	1385149	831089-1939209
Chlorobenzene-D5	18.86	ok	18.86	18.53-19.19	635480	ok	694331	416599-972063

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1338-ICC1338	Q30799.D	07/24/15 18:08	AA	10	GCMSQ	TO-15	
MSQ1338-IC1338	Q30800.D	07/24/15 19:54	AA	40	GCMSQ	TO-15	
MSQ1338-IC1338	Q30801.D	07/24/15 20:43	AA	30	GCMSQ	TO-15	
MSQ1338-IC1338	Q30802.D	07/24/15 21:32	AA	20	GCMSQ	TO-15	
MSQ1338-IC1338	Q30803.D	07/24/15 22:21	AA	5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30804.D	07/24/15 23:09	AA	2	GCMSQ	TO-15	Reporting this level
MSQ1338-IC1338	Q30805.D	07/24/15 23:58	AA	0.5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30806.D	07/25/15 00:46	AA	0.2	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.57	9.15	0.609	ok	0.608	0.548-0.668
Acrolein	5.42	9.15	0.592	ok	0.592	0.532-0.652
Acrylonitrile	6.05	9.15	0.661	ok	0.661	0.601-0.721
1,3-Butadiene	4.51	9.15	0.493	ok	0.493	0.433-0.553
Benzene	11.29	11.80	0.957	ok	0.957	0.897-1.017
Bromodichloromethane	12.77	11.80	1.082	ok	1.082	1.022-1.142
Bromoform	19.98	18.86	1.059	ok	1.060	1.000-1.120
Bromomethane	4.79	9.15	0.523	ok	0.523	0.463-0.583
Bromoethene	5.33	9.15	0.583	ok	0.581	0.521-0.641
n-Butylbenzene	24.90	18.86	1.320	ok	1.320	1.260-1.380
sec-Butylbenzene	23.92	18.86	1.268	ok	1.268	1.208-1.328
Benzyl Chloride	23.69	18.86	1.256	ok	1.256	1.196-1.316
Carbon disulfide	6.93	9.15	0.757	ok	0.757	0.697-0.817
Chlorobenzene	18.93	18.86	1.004	ok	1.004	0.944-1.064
Chloroethane	4.96	9.15	0.542	ok	0.542	0.482-0.602
Chloroform	9.32	9.15	1.019	ok	1.018	0.958-1.078
Chloromethane	4.16	9.15	0.455	ok	0.454	0.394-0.514
3-Chloropropene	6.71	9.15	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.38	18.86	1.187	ok	1.186	1.126-1.246
Carbon tetrachloride	11.51	9.15	1.258	ok	1.258	1.198-1.318
Cyclohexane	11.69	11.80	0.991	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.90	9.15	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.45	9.15	0.705	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.90	18.86	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.30	9.15	1.126	ok	1.125	1.065-1.185
1,2-Dichloropropane	12.48	11.80	1.058	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.82	11.80	1.341	ok	1.340	1.280-1.400
1,4-Dioxane	12.86	11.80	1.090	ok	1.088	1.028-1.148
Dichlorodifluoromethane	4.00	9.15	0.437	ok	0.436	0.376-0.496
Dibromochloromethane	16.47	18.86	0.873	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.67	9.15	0.838	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.93	9.15	0.976	ok	0.977	0.917-1.037
cis-1,3-Dichloropropene	14.18	11.80	1.202	ok	1.201	1.141-1.261
m-Dichlorobenzene	23.71	18.86	1.257	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.38	18.86	1.293	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.83	18.86	1.264	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.03	11.80	1.274	ok	1.274	1.214-1.334
Ethanol	5.06	9.15	0.553	ok	0.553	0.493-0.613
Ethylbenzene	19.60	18.86	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.23	9.15	1.009	ok	1.008	0.948-1.068

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1338-ICC1338	Q30799.D	07/24/15 18:08	AA	10	GCMSQ	TO-15	
MSQ1338-IC1338	Q30800.D	07/24/15 19:54	AA	40	GCMSQ	TO-15	
MSQ1338-IC1338	Q30801.D	07/24/15 20:43	AA	30	GCMSQ	TO-15	
MSQ1338-IC1338	Q30802.D	07/24/15 21:32	AA	20	GCMSQ	TO-15	
MSQ1338-IC1338	Q30803.D	07/24/15 22:21	AA	5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30804.D	07/24/15 23:09	AA	2	GCMSQ	TO-15	Reporting this level
MSQ1338-IC1338	Q30805.D	07/24/15 23:58	AA	0.5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30806.D	07/25/15 00:46	AA	0.2	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.70	18.86	1.204	ok	1.203	1.143-1.263
Freon 113	6.88	9.15	0.752	ok	0.751	0.691-0.811
Freon 114	4.26	9.15	0.466	ok	0.464	0.404-0.524
Heptane	13.32	11.80	1.129	ok	1.129	1.069-1.189
Hexachlorobutadiene	27.70	18.86	1.469	ok	1.468	1.408-1.528
Hexane	9.22	9.15	1.008	ok	1.007	0.947-1.067
2-Hexanone	16.28	18.86	0.863	ok	0.862	0.802-0.922
Isopropylbenzene	21.63	18.86	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.84	9.15	0.638	ok	0.636	0.576-0.696
p-Isopropyltoluene	24.20	18.86	1.283	ok	1.283	1.223-1.343
Methylene chloride	6.57	9.15	0.718	ok	0.718	0.658-0.778
Methyl ethyl ketone	8.38	9.15	0.916	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.27	11.80	1.209	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.98	9.15	0.872	ok	0.871	0.811-0.931
Methylmethacrylate	13.16	11.80	1.115	ok	1.115	1.055-1.175
Naphthalene	27.25	18.86	1.445	ok	1.445	1.385-1.505
Nonane	21.09	18.86	1.118	ok	1.118	1.058-1.178
Pentane	6.14	9.15	0.671	ok	0.671	0.611-0.731
Propylene	3.92	9.15	0.428	ok	0.428	0.368-0.488
Styrene	20.49	18.86	1.086	ok	1.086	1.026-1.146
1,1,1-Trichloroethane	10.65	9.15	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.91	18.86	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.65	18.86	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.31	11.80	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.11	18.86	1.437	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.49	18.86	1.245	ok	1.245	1.185-1.305
1,3,5-Trimethylbenzene	22.83	18.86	1.210	ok	1.210	1.150-1.270
2,2,4-Trimethylpentane	12.90	11.80	1.093	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.51	9.15	0.711	ok	0.708	0.648-0.768
tert-Butylbenzene	23.48	18.86	1.245	ok	1.245	1.185-1.305
Tetrachloroethylene	17.74	18.86	0.941	ok	0.941	0.881-1.001
Tetrahydrofuran	9.86	9.15	1.078	ok	1.076	1.016-1.136
Toluene	15.78	11.80	1.337	ok	1.337	1.277-1.397
Trichloroethylene	12.84	11.80	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.76	9.15	0.630	ok	0.629	0.569-0.689
Vinyl chloride	4.38	9.15	0.479	ok	0.478	0.418-0.538
Vinyl Acetate	8.07	9.15	0.882	ok	0.882	0.822-0.942
m,p-Xylene	19.92	18.86	1.056	ok	1.056	0.996-1.116
o-Xylene	20.66	18.86	1.095	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1338-ICC1338	Q30799.D	07/24/15 18:08	AA	10	GCMSQ	TO-15	
MSQ1338-IC1338	Q30800.D	07/24/15 19:54	AA	40	GCMSQ	TO-15	
MSQ1338-IC1338	Q30801.D	07/24/15 20:43	AA	30	GCMSQ	TO-15	
MSQ1338-IC1338	Q30802.D	07/24/15 21:32	AA	20	GCMSQ	TO-15	
MSQ1338-IC1338	Q30803.D	07/24/15 22:21	AA	5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30804.D	07/24/15 23:09	AA	2	GCMSQ	TO-15	Reporting this level
MSQ1338-IC1338	Q30805.D	07/24/15 23:58	AA	0.5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30806.D	07/25/15 00:46	AA	0.2	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.15	ok	9.15	8.82-9.48	300825	ok	300047	180028-420066
1,4-Difluorobenzene	11.80	ok	11.80	11.47-12.13	1401305	ok	1385149	831089-1939209
Chlorobenzene-D5	18.86	ok	18.86	18.53-19.19	654638	ok	694331	416599-972063

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1338-ICC1338	Q30799.D	07/24/15 18:08	AA	10	GCMSQ	TO-15	
MSQ1338-IC1338	Q30800.D	07/24/15 19:54	AA	40	GCMSQ	TO-15	
MSQ1338-IC1338	Q30801.D	07/24/15 20:43	AA	30	GCMSQ	TO-15	
MSQ1338-IC1338	Q30802.D	07/24/15 21:32	AA	20	GCMSQ	TO-15	
MSQ1338-IC1338	Q30803.D	07/24/15 22:21	AA	5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30804.D	07/24/15 23:09	AA	2	GCMSQ	TO-15	
MSQ1338-IC1338	Q30805.D	07/24/15 23:58	AA	0.5	GCMSQ	TO-15	Reporting this level
MSQ1338-IC1338	Q30806.D	07/25/15 00:46	AA	0.2	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acrolein	5.42	9.15	0.592	ok	0.592	0.532-0.652
Acrylonitrile	6.04	9.15	0.660	ok	0.661	0.601-0.721
1,3-Butadiene	4.51	9.15	0.493	ok	0.493	0.433-0.553
Benzene	11.29	11.80	0.957	ok	0.957	0.897-1.017
Bromodichloromethane	12.77	11.80	1.082	ok	1.082	1.022-1.142
Bromoform	19.98	18.86	1.059	ok	1.060	1.000-1.120
Bromomethane	4.79	9.15	0.523	ok	0.523	0.463-0.583
Bromoethene	5.32	9.15	0.581	ok	0.581	0.521-0.641
n-Butylbenzene	24.90	18.86	1.320	ok	1.320	1.260-1.380
sec-Butylbenzene	23.92	18.86	1.268	ok	1.268	1.208-1.328
Benzyl Chloride	23.69	18.86	1.256	ok	1.256	1.196-1.316
Carbon disulfide	6.93	9.15	0.757	ok	0.757	0.697-0.817
Chlorobenzene	18.94	18.86	1.004	ok	1.004	0.944-1.064
Chloroethane	4.95	9.15	0.541	ok	0.542	0.482-0.602
Chloroform	9.32	9.15	1.019	ok	1.018	0.958-1.078
Chloromethane	4.15	9.15	0.454	ok	0.454	0.394-0.514
3-Chloropropene	6.71	9.15	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.38	18.86	1.187	ok	1.186	1.126-1.246
Carbon tetrachloride	11.51	9.15	1.258	ok	1.258	1.198-1.318
Cyclohexane	11.69	11.80	0.991	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.90	9.15	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.45	9.15	0.705	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.90	18.86	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.29	9.15	1.125	ok	1.125	1.065-1.185
1,2-Dichloropropane	12.48	11.80	1.058	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.82	11.80	1.341	ok	1.340	1.280-1.400
1,4-Dioxane	12.87	11.80	1.091	ok	1.088	1.028-1.148
Dichlorodifluoromethane	4.00	9.15	0.437	ok	0.436	0.376-0.496
Dibromochloromethane	16.48	18.86	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.66	9.15	0.837	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.94	9.15	0.977	ok	0.977	0.917-1.037
cis-1,3-Dichloropropene	14.18	11.80	1.202	ok	1.201	1.141-1.261
m-Dichlorobenzene	23.71	18.86	1.257	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.38	18.86	1.293	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.83	18.86	1.264	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.04	11.80	1.275	ok	1.274	1.214-1.334
Ethanol	5.06	9.15	0.553	ok	0.553	0.493-0.613
Ethylbenzene	19.60	18.86	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.23	9.15	1.009	ok	1.008	0.948-1.068
4-Ethyltoluene	22.70	18.86	1.204	ok	1.203	1.143-1.263

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1338-ICC1338	Q30799.D	07/24/15 18:08	AA	10	GCMSQ	TO-15	
MSQ1338-IC1338	Q30800.D	07/24/15 19:54	AA	40	GCMSQ	TO-15	
MSQ1338-IC1338	Q30801.D	07/24/15 20:43	AA	30	GCMSQ	TO-15	
MSQ1338-IC1338	Q30802.D	07/24/15 21:32	AA	20	GCMSQ	TO-15	
MSQ1338-IC1338	Q30803.D	07/24/15 22:21	AA	5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30804.D	07/24/15 23:09	AA	2	GCMSQ	TO-15	
MSQ1338-IC1338	Q30805.D	07/24/15 23:58	AA	0.5	GCMSQ	TO-15	Reporting this level
MSQ1338-IC1338	Q30806.D	07/25/15 00:46	AA	0.2	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Freon 113	6.87	9.15	0.751	ok	0.751	0.691-0.811
Freon 114	4.25	9.15	0.464	ok	0.464	0.404-0.524
Heptane	13.32	11.80	1.129	ok	1.129	1.069-1.189
Hexachlorobutadiene	27.70	18.86	1.469	ok	1.468	1.408-1.528
Hexane	9.22	9.15	1.008	ok	1.007	0.947-1.067
2-Hexanone	16.27	18.86	0.863	ok	0.862	0.802-0.922
Isopropylbenzene	21.63	18.86	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.83	9.15	0.637	ok	0.636	0.576-0.696
p-Isopropyltoluene	24.20	18.86	1.283	ok	1.283	1.223-1.343
Methylene chloride	6.57	9.15	0.718	ok	0.718	0.658-0.778
Methyl ethyl ketone	8.38	9.15	0.916	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.28	11.80	1.210	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.99	9.15	0.873	ok	0.871	0.811-0.931
Methylmethacrylate	13.16	11.80	1.115	ok	1.115	1.055-1.175
Naphthalene	27.25	18.86	1.445	ok	1.445	1.385-1.505
Nonane	21.10	18.86	1.119	ok	1.118	1.058-1.178
Propylene	3.92	9.15	0.428	ok	0.428	0.368-0.488
Styrene	20.49	18.86	1.086	ok	1.086	1.026-1.146
1,1,1-Trichloroethane	10.65	9.15	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.91	18.86	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.65	18.86	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.30	11.80	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.12	18.86	1.438	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.49	18.86	1.245	ok	1.245	1.185-1.305
1,3,5-Trimethylbenzene	22.83	18.86	1.210	ok	1.210	1.150-1.270
Tertiary Butyl Alcohol	6.51	9.15	0.711	ok	0.708	0.648-0.768
tert-Butylbenzene	23.48	18.86	1.245	ok	1.245	1.185-1.305
Tetrachloroethylene	17.74	18.86	0.941	ok	0.941	0.881-1.001
Tetrahydrofuran	9.88	9.15	1.080	ok	1.076	1.016-1.136
Toluene	15.77	11.80	1.336	ok	1.337	1.277-1.397
Trichloroethylene	12.84	11.80	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.76	9.15	0.630	ok	0.629	0.569-0.689
Vinyl chloride	4.37	9.15	0.478	ok	0.478	0.418-0.538
m,p-Xylene	19.92	18.86	1.056	ok	1.056	0.996-1.116
o-Xylene	20.66	18.86	1.095	ok	1.096	1.036-1.156

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.15	ok	9.15	8.82-9.48	314062	ok	300047	180028-420066

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1338-ICC1338	Q30799.D	07/24/15 18:08	AA	10	GCMSQ	TO-15	
MSQ1338-IC1338	Q30800.D	07/24/15 19:54	AA	40	GCMSQ	TO-15	
MSQ1338-IC1338	Q30801.D	07/24/15 20:43	AA	30	GCMSQ	TO-15	
MSQ1338-IC1338	Q30802.D	07/24/15 21:32	AA	20	GCMSQ	TO-15	
MSQ1338-IC1338	Q30803.D	07/24/15 22:21	AA	5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30804.D	07/24/15 23:09	AA	2	GCMSQ	TO-15	
MSQ1338-IC1338	Q30805.D	07/24/15 23:58	AA	0.5	GCMSQ	TO-15	Reporting this level
MSQ1338-IC1338	Q30806.D	07/25/15 00:46	AA	0.2	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
1,4-Difluorobenzene	11.80	ok	11.80	11.47-12.13	1475353	ok	1385149	831089-1939209
Chlorobenzene-D5	18.86	ok	18.86	18.53-19.19	698036	ok	694331	416599-972063

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1338-ICC1338	Q30799.D	07/24/15 18:08	AA	10	GCMSQ	TO-15	
MSQ1338-IC1338	Q30800.D	07/24/15 19:54	AA	40	GCMSQ	TO-15	
MSQ1338-IC1338	Q30801.D	07/24/15 20:43	AA	30	GCMSQ	TO-15	
MSQ1338-IC1338	Q30802.D	07/24/15 21:32	AA	20	GCMSQ	TO-15	
MSQ1338-IC1338	Q30803.D	07/24/15 22:21	AA	5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30804.D	07/24/15 23:09	AA	2	GCMSQ	TO-15	
MSQ1338-IC1338	Q30805.D	07/24/15 23:58	AA	0.5	GCMSQ	TO-15	
MSQ1338-IC1338	Q30806.D	07/25/15 00:46	AA	0.2	GCMSQ	TO-15	Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Benzene	11.29	11.80	0.957	ok	0.957	0.897-1.017
Chloroethane	4.96	9.15	0.542	ok	0.542	0.482-0.602
Chloroform	9.32	9.15	1.019	ok	1.018	0.958-1.078
Carbon tetrachloride	11.51	9.15	1.258	ok	1.258	1.198-1.318
1,1-Dichloroethane	7.90	9.15	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.45	9.15	0.705	ok	0.705	0.645-0.765
1,2-Dichloroethane	10.29	9.15	1.125	ok	1.125	1.065-1.185
trans-1,2-Dichloroethylene	7.65	9.15	0.836	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.94	9.15	0.977	ok	0.977	0.917-1.037
Ethylbenzene	19.60	18.86	1.039	ok	1.039	0.979-1.099
1,1,1-Trichloroethane	10.65	9.15	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.91	18.86	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.65	18.86	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.30	11.80	1.297	ok	1.297	1.237-1.357
Tetrachloroethylene	17.75	18.86	0.941	ok	0.941	0.881-1.001
Toluene	15.78	11.80	1.337	ok	1.337	1.277-1.397
Trichloroethylene	12.84	11.80	1.088	ok	1.088	1.028-1.148
Vinyl chloride	4.37	9.15	0.478	ok	0.478	0.418-0.538
m,p-Xylene	19.93	18.86	1.057	ok	1.056	0.996-1.116
o-Xylene	20.67	18.86	1.096	ok	1.096	1.036-1.156

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.15	ok	9.15	8.82-9.48	293239	ok	300047	180028-420066
1,4-Difluorobenzene	11.80	ok	11.80	11.47-12.13	1389627	ok	1385149	831089-1939209
Chlorobenzene-D5	18.86	ok	18.86	18.53-19.19	648905	ok	694331	416599-972063

Volatile Surrogate Recovery Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Method: TO-15 **Matrix:** AIR

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1
MC40134-1	Q30820.D	102
MC40134-2	Q30821.D	110
MC40134-2DUP	Q30822.D	114
MSJ1614-SCC	J32268.D	93
MSQ1324-SCC	Q30526.D	95
MSQ1339-BS	Q30817B.D	103
MSQ1339-MB	Q30819.D	104
MSJ1614-BS	J32265C.D	100
MSJ1614-MB	J32267.D	88
MSQ1324-BS	Q30525A.D	96
MSQ1324-MB	Q30527.D	94

Surrogate Compounds	Recovery Limits
S1 = 4-Bromofluorobenzene	50-129%

Initial Calibration Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSJ1614-ICC1614
Lab FileID: J32262.D

Response Factor Report MSJ

Method : C:\msdchem\1\methods\J150714T.M (RTE Integrator)
Title : TO15 by GCMS w/DB-1 60 m X .25 mm ID 1.0 um
Last Update : Wed Jul 15 09:23:43 2015
Response via : Initial Calibration

Calibration Files
.2 =j32256.D .5 =j32257.D 2 =j32264.D 5 =j32263.D
10 =j32262.D 20 =j32261.D 30 =j32260.D 40 =j32259.D

Compound	.2	.5	2	5	10	20	30	40	Avg	%RSD
1) I BROMOCHLOROMETHANE	----------ISTD----------									
2) DICHLORODIFL	5.109	4.591	3.695	4.038	3.778	3.940	4.092	5.154	4.299	13.47
3) PROPYLENE	1.049	0.890	0.709	0.742	0.716	0.740	0.764	0.955	0.821	15.58
4) FREON 114	4.334	3.882	3.147	3.451	3.171	3.288	3.493	4.222	3.624	12.86
5) CHLOROMETHAN	1.181	1.045	0.830	0.910	0.851	0.885	0.924	1.105	0.966	13.28
6) VINYL CHLORI	1.251	1.153	0.991	1.099	1.038	1.075	1.140	1.350	1.137	10.24
7) 1,3-BUTADIEN	1.175	0.922	0.702	0.765	0.690	0.720	0.771	0.941	0.836	19.99
8) BROMOMETHANE	1.419	1.304	1.121	1.252	1.185	1.228	1.289	1.532	1.291	10.15
9) CHLOROETHANE	0.494	0.483	0.376	0.479	0.421	0.461	0.456	0.537	0.463	10.46
10) ACROLEIN	0.333	0.211	0.270	0.282	0.244	0.264	0.284	0.334	0.278	14.93
11) TRICHLOROFLU	5.130	4.625	3.561	4.095	3.642	3.829	4.019	5.004	4.238	14.33
12) ISOPROPYL AL	1.997	1.396	1.220	1.282	1.097	1.182	1.303	1.500	1.372	20.52
13) ACETONE		1.620	1.310	1.342	1.114	1.179	1.313	1.559	1.348	13.69
14) ACRYLONITRIL		0.477	0.595	0.642	0.575	0.630	0.671	0.791	0.626	15.36
15) PENTANE		1.185	0.813	0.960	0.830	0.897	0.916	1.100	0.957	14.46
16) 1,1-DICHLORO	1.299	1.173	0.982	1.220	1.089	1.183	1.200	1.392	1.192	10.41
17) CARBON DISUL	3.965	3.453	3.153	3.556	3.365	3.504	3.670	4.279	3.618	9.82
18) ETHANOL		0.626	0.263	0.242	0.194	0.197	0.216	0.247	0.284	53.95
---- Quadratic regression ---- Coefficient = 0.9991										
Response Ratio = 0.03421 + 0.12523 *A + 0.02783 *A^2										
19) BROMOETHENE	1.438	1.287	1.163	1.327	1.210	1.286	1.331	1.597	1.330	10.22
20) METHYLENE CH		1.072	0.856	1.002	0.921	1.013	1.005	1.154	1.003	9.62
21) 3-CHLOROPROP	1.272	1.107	0.829	0.959	0.894	0.987	0.990	1.241	1.035	15.32
22) FREON 113	2.615	2.192	1.913	2.400	2.208	2.519	2.533	2.994	2.422	13.46
23) TRANS-1,2-DI	1.282	1.136	0.981	1.229	1.147	1.274	1.278	1.471	1.225	11.64
24) TERTIARY BUT	1.933	1.620	1.787	2.046	1.790	1.945	2.129	2.566	1.977	14.52
25) METHYL TERTI	2.680	2.175	2.636	2.963	2.539	2.742	3.063	3.614	2.802	15.15
26) TETRAHYDROFU	0.924	0.724	0.848	0.974	0.828	0.912	1.018	1.195	0.928	15.22
27) HEXANE	1.726	1.632	1.316	1.540	1.454	1.597	1.593	1.863	1.590	10.39
28) VINYL ACETAT	2.263	1.730	2.155	2.487	2.136	2.305	2.550	3.055	2.335	16.44
29) 1,1-DICHLORO	2.215	2.167	1.755	2.037	1.976	2.168	2.165	2.603	2.136	11.31
30) METHYL ETHYL	1.849	1.332	1.526	1.751	1.499	1.606	1.833	2.176	1.696	15.49
31) cis-1,2-DICH	1.234	1.088	1.052	1.220	1.173	1.307	1.324	1.519	1.240	11.91
32) ETHYL ACETAT		2.664	2.668	3.030	2.639	2.819	3.071	3.627	2.931	12.08
33) CHLOROFORM	3.172	2.781	2.544	2.912	2.748	2.981	3.057	3.666	2.983	11.35
34) 1,1,1-TRICHL	3.727	3.380	2.796	3.222	3.091	3.389	3.477	4.204	3.411	12.40
35) CARBON TETRA	4.191	3.764	3.145	3.671	3.508	3.919	4.030	4.885	3.889	13.28
36) 1,2-DICHLORO	1.896	1.772	1.563	1.756	1.644	1.859	1.939	2.461	1.861	14.68
37) I 1,4-DIFLUOROBENZENE	----------ISTD----------									
38) BENZENE	0.894	0.706	0.744	0.882	0.737	0.815	0.818	0.957	0.819	10.72
39) CYCLOHEXANE	0.409	0.318	0.321	0.402	0.332	0.364	0.355	0.400	0.363	10.35
40) TRICHLOROETH	0.562	0.396	0.438	0.523	0.431	0.462	0.471	0.552	0.480	12.56
41) 1,2-DICHLORO	0.306	0.218	0.271	0.321	0.255	0.289	0.295	0.350	0.288	14.18
42) BROMODICHLOR	0.784	0.658	0.692	0.824	0.699	0.780	0.800	0.957	0.774	12.23

Initial Calibration Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSJ1614-ICC1614
Lab FileID: J32262.D

43)	2,2,4-TRIMET	1.636	1.208	1.264	1.490	1.213	1.291	1.294	1.511	1.363	11.72
44)	1,4-DIOXANE	0.119	0.077	0.123	0.150	0.118	0.131	0.150	0.169	0.130	21.61
45)	METHYL METHA	0.315	0.217	0.299	0.362	0.271	0.290	0.327	0.385	0.308	17.00
46)	HEPTANE	0.598	0.458	0.456	0.536	0.439	0.464	0.470	0.559	0.497	11.75
47)	METHYL ISOBU	0.496	0.348	0.494	0.581	0.440	0.469	0.526	0.618	0.497	16.83
48)	cis-1,3-DICH	0.455	0.359	0.448	0.567	0.469	0.531	0.550	0.658	0.505	18.11
49)	TOLUENE	0.632	0.414	0.535	0.684	0.533	0.613	0.656	0.754	0.603	17.51
50)	trans-1,3-DI		0.282	0.414	0.539	0.429	0.490	0.519	0.619	0.470	22.93
51)	1,1,2-TRICHL	0.258	0.202	0.259	0.329	0.261	0.302	0.322	0.375	0.288	18.76
52)	1,3-DICHLORO	0.389	0.312	0.436	0.536	0.419	0.474	0.509	0.587	0.458	19.08
53)	I CHLOROBENZENE-D5	----------ISTD----------									
54)	2-HEXANONE		0.449	0.697	0.859	0.673	0.744	0.834	0.988	0.749	22.80
55)	TETRACHLOROE	0.845	0.721	0.831	0.975	0.872	1.029	1.096	1.282	0.956	18.62
56)	DIBROMOCHLOR	1.155	1.014	1.187	1.423	1.248	1.456	1.539	1.855	1.359	19.55
57)	1,2-DIBROMOE		0.647	0.928	1.091	0.918	1.086	1.146	1.361	1.025	21.78
58)	1,1,1,2-TETR	0.824	0.681	0.821	0.960	0.822	0.996	1.097	1.308	0.939	21.01
59)	CHLOROBENZEN		0.991	1.381	1.616	1.363	1.654	1.784	2.095	1.555	22.62
60)	ETHYLBENZENE		1.627	2.327	2.660	2.102	2.431	2.672	3.044	2.409	18.92
61)	m,p-XYLENE		0.556	0.861	1.008	0.808	0.948	1.077	1.217	0.925	22.91
62)	o-XYLENE		0.528	0.848	0.985	0.806	0.945	1.077	1.266	0.922	25.08
63)	STYRENE		0.619	1.155	1.418	1.180	1.389	1.562	1.802	1.304	28.73
64)	NONANE	1.446	1.170	1.404	1.567	1.281	1.411	1.452	1.763	1.437	12.37
65)	BROMOFORM		0.694	0.922	1.130	1.029	1.271	1.407	1.669	1.160	27.81
66)	4-BROMOFLUOR	1.053	0.968	1.076	1.151	1.218	1.329	1.304	1.291	1.174	11.34
67)	1,1,2,2-TETR	1.003	0.720	0.968	1.126	0.910	1.044	1.176	1.388	1.042	18.94
68)	ISOPROPYLBEN	2.309	1.747	2.584	2.987	2.424	2.793	3.158	3.708	2.714	21.87
69)	2-CHLOROTOLU		1.086	1.644	1.923	1.602	1.896	2.092	2.513	1.822	24.42
70)	4-ETHYLTOLUE		1.137	2.033	2.494	2.072	2.434	2.812	3.278	2.323	29.14
71)	1,3,5-TRIMET	1.571	1.131	1.798	2.134	1.744	2.013	2.311	2.710	1.926	24.98
72)	TERT-BUTYLBE		1.199	2.046	2.416	2.045	2.426	2.855	3.411	2.342	29.68
73)	1,2,4-TRIMET		0.859	1.570	1.921	1.618	1.918	2.270	2.707	1.838	31.69

---- Quadratic regression ---- Coefficient = 0.9992
Response Ratio = 0.12024 + 1.07181 *A + 0.39769 *A^2

74)	m-DICHLOROBE		0.445	0.744	1.060	0.970	1.238	1.427	1.708	1.085	38.87

---- Quadratic regression ---- Coefficient = 0.9995
Response Ratio = 0.02534 + 0.71421 *A + 0.24439 *A^2

75)	BENZYL CHLOR		1.086	1.644	1.923	1.602	1.896	2.092	2.513	1.822	24.42
76)	p-DICHLOROBE		0.356	0.660	0.921	0.886	1.148	1.332	1.580	0.983	41.84

---- Quadratic regression ---- Coefficient = 0.9997
Response Ratio = 0.00626 + 0.67805 *A + 0.22365 *A^2

77)	SEC-BUTYLBEN		1.561	2.748	3.275	2.671	3.088	3.538	4.157	3.006	27.01
78)	4-ISOPROPYLT		1.248	2.053	2.527	2.124	2.465	2.876	3.393	2.384	28.43
79)	o-DICHLOROBE		0.423	0.680	0.923	0.837	1.030	1.189	1.395	0.925	34.79

---- Quadratic regression ---- Coefficient = 0.9996
Response Ratio = 0.02229 + 0.63805 *A + 0.18652 *A^2

80)	n-BUTYLBENZE		0.754	1.533	1.971	1.684	1.953	2.285	2.707	1.841	33.46

---- Quadratic regression ---- Coefficient = 0.9992
Response Ratio = 0.10820 + 1.15536 *A + 0.37718 *A^2

81)	HEXACHLOROBU		0.308	0.401	0.499	0.493	0.656	0.817	1.005	0.597	41.08

---- Quadratic regression ---- Coefficient = 0.9993
Response Ratio = 0.00123 + 0.34115 *A + 0.16324 *A^2

82)	1,2,4-TRICHL		0.043	0.085	0.133	0.159	0.236	0.301	0.347	0.186	60.40

---- Quadratic regression ---- Coefficient = 0.9994

Initial Calibration Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSJ1614-ICC1614
Lab FileID: J32262.D

```
              Response Ratio = -0.01400 + 0.13620 *A + 0.05415 *A^2

83) NAPHTHALENE        0.163 0.225 0.374 0.445 0.639 0.806 0.914 0.509  56.15
            ---- Quadratic regression ----  Coefficient =  0.9993
              Response Ratio = -0.04097 + 0.39918 *A + 0.13302 *A^2

--------------------------------------------------------------------------------
(#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          J150714T.M        Wed Jul 15 09:38:09 2015
```

Continuing Calibration Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSJ1614-CC1614
Lab FileID: J32265B.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\J150714\j32265B.D Vial: 4
Acq On : 14 Jul 2015 10:00 pm Operator: pauln
Sample : cc1614-10 (m118) Inst : MSJ
Misc : ms34687,msj1614,,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\msdchem\1\methods\J150714T.M (RTE Integrator)
Title : TO15 by GCMS w/DB-1 60 m X .25 mm ID 1.0 um
Last Update : Wed Jul 15 09:23:43 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	BROMOCHLOROMETHANE	1.000	1.000	0.0	82	0.00	9.68
2	m	DICHLORODIFLUOROMETHANE	4.299	4.898	-13.9	107	0.00	4.22
3	m	PROPYLENE	0.821	0.905	-10.2	104	0.00	4.14
4	m	FREON 114	3.624	4.174	-15.2	108	0.00	4.50
5	m	CHLOROMETHANE	0.966	1.098	-13.7	106	0.00	4.39
6	m	VINYL CHLORIDE	1.137	1.339	-17.8	106	0.00	4.63
7	m	1,3-BUTADIENE	0.836	0.916	-9.6	109	0.00	4.77
8	m	BROMOMETHANE	1.291	1.507	-16.7	105	0.00	5.06
9	m	CHLOROETHANE	0.463	0.483	-4.3	95	0.00	5.25
10	m	ACROLEIN	0.278	0.244	12.2	82	0.00	5.74
11	m	TRICHLOROFLUOROMETHANE	4.238	4.593	-8.4	104	0.00	6.08
12	m	ISOPROPYL ALCOHOL	1.372	1.397	-1.8	105	0.00	6.14
13	m	ACETONE	1.348	1.198	11.1	89	0.00	5.88
14	m	ACRYLONITRILE	0.626	0.516	17.6	74	0.01	6.40
15	m	PENTANE	0.957	0.985	-2.9	98	0.00	6.47
16	m	1,1-DICHLOROETHYLENE	1.192	1.224	-2.7	93	0.00	6.80
17	m	CARBON DISULFIDE	3.618	4.135	-14.3	101	0.00	7.31
		----------	Amount	Calc.	%Drift	----------		
18	m	ETHANOL	10.000	11.283	-12.8	90	0.00	5.36
		----------	AvgRF	CCRF	%Dev	----------		
19	m	BROMOETHENE	1.330	1.481	-11.4	101	0.00	5.62
20	m	METHYLENE CHLORIDE	1.003	0.938	6.5	84	0.00	6.94
21	m	3-CHLOROPROPENE	1.035	0.948	8.4	87	0.00	7.08
22	m	FREON 113	2.422	2.169	10.4	81	0.00	7.25
23	m	TRANS-1,2-DICHLOROETHYLEN	1.225	1.151	6.0	83	0.00	8.09
24	m	TERTIARY BUTYL ALCOHOL	1.977	2.296	-16.1	106	0.00	6.83
25	m	METHYL TERTIARY BUTYL ETH	2.802	2.669	4.7	87	0.00	8.42
26	m	TETRAHYDROFURAN	0.928	0.896	3.4	89	0.00	10.45
27	m	HEXANE	1.590	1.486	6.5	84	0.00	9.74
28	m	VINYL ACETATE	2.335	2.153	7.8	83	0.00	8.52
29	m	1,1-DICHLOROETHANE	2.136	2.036	4.7	85	0.00	8.34
30	m	METHYL ETHYL KETONE	1.696	1.612	5.0	89	0.00	8.85
31	m	cis-1,2-DICHLOROETHYLENE	1.240	1.176	5.2	83	0.00	9.45
32	m	ETHYL ACETATE	2.931	2.773	5.4	87	0.00	9.75
33	m	CHLOROFORM	2.983	2.850	4.5	86	0.00	9.86
34	m	1,1,1-TRICHLOROETHANE	3.411	3.196	6.3	85	0.00	11.29
35	m	CARBON TETRACHLORIDE	3.889	3.587	7.8	84	0.00	12.22
36	m	1,2-DICHLOROETHANE	1.861	1.704	8.4	85	0.00	10.92
37	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	78	0.00	12.53

Continuing Calibration Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSJ1614-CC1614
Lab FileID: J32265B.D

38	m	BENZENE	0.819	0.759	7.3	81	0.00	11.99
39	m	CYCLOHEXANE	0.363	0.347	4.4	82	0.00	12.42
40	m	TRICHLOROETHYLENE	0.480	0.485	-1.0	88	0.00	13.67
41	m	1,2-DICHLOROPROPANE	0.288	0.270	6.2	83	0.00	13.28
42	m	BROMODICHLOROMETHANE	0.774	0.809	-4.5	91	0.00	13.59
43	m	2,2,4-TRIMETHYLPENTANE	1.363	1.347	1.2	87	0.00	13.73
44	m	1,4-DIOXANE	0.130	0.149	-14.6	99	0.00	13.68
45	m	METHYL METHACRYLATE	0.308	0.304	1.3	88	0.00	14.01
46	m	HEPTANE	0.497	0.498	-0.2	89	0.00	14.17
47	m	METHYL ISOBUTYL KETONE	0.497	0.557	-12.1	99	0.00	15.20
48	m	cis-1,3-DICHLOROPROPENE	0.505	0.503	0.4	84	0.00	15.13
49	m	TOLUENE	0.603	0.569	5.6	83	0.00	16.87
50	m	trans-1,3-DICHLOROPROPENE	0.470	0.462	1.7	84	0.00	16.05
51	m	1,1,2-TRICHLOROETHANE	0.288	0.291	-1.0	87	0.00	16.36
52	m	1,3-DICHLOROPROPANE	0.458	0.459	-0.2	86	0.00	16.92
53	I	CHLOROBENZENE-D5	1.000	1.000	0.0	86	0.00	20.14
54	m	2-HEXANONE	0.749	0.817	-9.1	104	0.00	17.38
55	m	TETRACHLOROETHYLENE	0.956	0.869	9.1	86	0.00	18.99
56	m	DIBROMOCHLOROMETHANE	1.359	1.301	4.3	90	0.00	17.66
57	m	1,2-DIBROMOETHANE	1.025	0.911	11.1	85	0.00	18.12
58	m	1,1,1,2-TETRACHLOROETHANE	0.939	0.839	10.6	88	0.00	20.19
59	m	CHLOROBENZENE	1.555	1.377	11.4	87	0.00	20.22
60	m	ETHYLBENZENE	2.409	2.136	11.3	87	0.00	20.90
61	m	m,p-XYLENE	0.925	0.822	11.1	87	0.00	21.24
62	m	o-XYLENE	0.922	0.842	8.7	90	0.00	22.04
63	m	STYRENE	1.304	1.193	8.5	87	0.00	21.85
64	m	NONANE	1.437	1.503	-4.6	101	0.00	22.46
65	m	BROMOFORM	1.160	1.113	4.1	93	0.00	21.33
66	S	4-BROMOFLUOROBENZENE	1.174	1.171	0.3	83	0.00	22.83
67	m	1,1,2,2-TETRACHLOROETHANE	1.042	1.138	-9.2	108	0.00	22.02
68	m	ISOPROPYLBENZENE	2.714	2.592	4.5	92	0.00	23.08
69	m	2-CHLOROTOLUENE	1.822	1.823	-0.1	98	0.00	23.91
70	m	4-ETHYLTOLUENE	2.323	2.379	-2.4	99	0.00	24.24
71	m	1,3,5-TRIMETHYLBENZENE	1.926	2.089	-8.5	103	0.00	24.38
72	m	TERT-BUTYLBENZENE	2.342	2.433	-3.9	102	0.00	25.11
		----------	Amount	Calc.	%Drift			----------
73	m	1,2,4-TRIMETHYLBENZENE	10.000	12.504	-25.0	111	0.00	25.12
74	m	m-DICHLOROBENZENE	10.000	11.531	-15.3	104	0.00	25.39
		----------	AvgRF	CCRF	%Dev			----------
75	m	BENZYL CHLORIDE	1.822	1.823	-0.1	98	0.00	23.91
		----------	Amount	Calc.	%Drift			----------
76	m	p-DICHLOROBENZENE	10.000	11.287	-12.9	102	0.00	25.52
		----------	AvgRF	CCRF	%Dev			----------
77	m	SEC-BUTYLBENZENE	3.006	3.208	-6.7	103	0.00	25.61
78	m	4-ISOPROPYLTOLUENE	2.384	2.600	-9.1	105	0.00	25.91
		----------	Amount	Calc.	%Drift			----------
79	m	o-DICHLOROBENZENE	10.000	12.354	-23.5	112	0.00	26.15
80	m	n-BUTYLBENZENE	10.000	13.193	-31.9#	117	0.00	26.64
81	m	HEXACHLOROBUTADIENE	10.000	15.141	-51.4#	155	0.00	29.54
82	m	1,2,4-TRICHLOROBENZENE	10.000	13.987	-39.9#	153	0.01	28.86
83	m	NAPHTHALENE	10.000	12.703	-27.0	131	0.00	29.02

Continuing Calibration Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSJ1614-CC1614
Lab FileID: J32265B.D

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(#) = Out of Range                SPCC's out = 0  CCC's out = 0
 j32262.D   J150714T.M       Wed Jul 15 10:47:35 2015
```

Initial Calibration Verification

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSJ1614-ICV1614
Lab FileID: J32265A.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\J150714\j32265A.D Vial: 4
Acq On : 14 Jul 2015 10:00 pm Operator: pauln
Sample : icv1614-10 (m118) Inst : MSJ
Misc : ms34687,msj1614,,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\msdchem\1\methods\J150714T.M (RTE Integrator)
Title : TO15 by GCMS w/DB-1 60 m X .25 mm ID 1.0 um
Last Update : Wed Jul 15 09:23:43 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	BROMOCHLOROMETHANE	1.000	1.000	0.0	82	0.00	9.68
2	m	DICHLORODIFLUOROMETHANE	4.299	4.898	-13.9	107	0.00	4.22
3	m	PROPYLENE	0.821	0.905	-10.2	104	0.00	4.14
4	m	FREON 114	3.624	4.174	-15.2	108	0.00	4.50
5	m	CHLOROMETHANE	0.966	1.098	-13.7	106	0.00	4.39
6	m	VINYL CHLORIDE	1.137	1.339	-17.8	106	0.00	4.63
7	m	1,3-BUTADIENE	0.836	0.916	-9.6	109	0.00	4.77
8	m	BROMOMETHANE	1.291	1.507	-16.7	105	0.00	5.06
9	m	CHLOROETHANE	0.463	0.483	-4.3	95	0.00	5.25
10	m	ACROLEIN	0.278	0.244	12.2	82	0.00	5.74
11	m	TRICHLOROFLUOROMETHANE	4.238	4.593	-8.4	104	0.00	6.08
12	m	ISOPROPYL ALCOHOL	1.372	1.397	-1.8	105	0.00	6.14
13	m	ACETONE	1.348	1.198	11.1	89	0.00	5.88
14	m	ACRYLONITRILE	0.626	0.516	17.6	74	0.01	6.40
15	m	PENTANE	0.957	0.985	-2.9	98	0.00	6.47
16	m	1,1-DICHLOROETHYLENE	1.192	1.224	-2.7	93	0.00	6.80
17	m	CARBON DISULFIDE	3.618	4.135	-14.3	101	0.00	7.31
		----------	Amount	Calc.	%Drift	----------		
18	m	ETHANOL	10.000	11.283	-12.8	90	0.00	5.36
		----------	AvgRF	CCRF	%Dev	----------		
19	m	BROMOETHENE	1.330	1.481	-11.4	101	0.00	5.62
20	m	METHYLENE CHLORIDE	1.003	0.938	6.5	84	0.00	6.94
21	m	3-CHLOROPROPENE	1.035	0.948	8.4	87	0.00	7.08
22	m	FREON 113	2.422	2.169	10.4	81	0.00	7.25
23	m	TRANS-1,2-DICHLOROETHYLEN	1.225	1.151	6.0	83	0.00	8.09
24	m	TERTIARY BUTYL ALCOHOL	1.977	2.296	-16.1	106	0.00	6.83
25	m	METHYL TERTIARY BUTYL ETH	2.802	2.669	4.7	87	0.00	8.42
26	m	TETRAHYDROFURAN	0.928	0.896	3.4	89	0.00	10.45
27	m	HEXANE	1.590	1.486	6.5	84	0.00	9.74
28	m	VINYL ACETATE	2.335	2.153	7.8	83	0.00	8.52
29	m	1,1-DICHLOROETHANE	2.136	2.036	4.7	85	0.00	8.34
30	m	METHYL ETHYL KETONE	1.696	1.612	5.0	89	0.00	8.85
31	m	cis-1,2-DICHLOROETHYLENE	1.240	1.176	5.2	83	0.00	9.45
32	m	ETHYL ACETATE	2.931	2.773	5.4	87	0.00	9.75
33	m	CHLOROFORM	2.983	2.850	4.5	86	0.00	9.86
34	m	1,1,1-TRICHLOROETHANE	3.411	3.196	6.3	85	0.00	11.29
35	m	CARBON TETRACHLORIDE	3.889	3.587	7.8	84	0.00	12.22
36	m	1,2-DICHLOROETHANE	1.861	1.704	8.4	85	0.00	10.92
37	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	78	0.00	12.53

Initial Calibration Verification

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSJ1614-ICV1614
Lab FileID: J32265A.D

38	m	BENZENE	0.819	0.759	7.3	81	0.00	11.99
39	m	CYCLOHEXANE	0.363	0.347	4.4	82	0.00	12.42
40	m	TRICHLOROETHYLENE	0.480	0.485	-1.0	88	0.00	13.67
41	m	1,2-DICHLOROPROPANE	0.288	0.270	6.2	83	0.00	13.28
42	m	BROMODICHLOROMETHANE	0.774	0.809	-4.5	91	0.00	13.59
43	m	2,2,4-TRIMETHYLPENTANE	1.363	1.347	1.2	87	0.00	13.73
44	m	1,4-DIOXANE	0.130	0.149	-14.6	99	0.00	13.68
45	m	METHYL METHACRYLATE	0.308	0.305	1.0	88	0.00	14.01
46	m	HEPTANE	0.497	0.498	-0.2	89	0.00	14.17
47	m	METHYL ISOBUTYL KETONE	0.497	0.557	-12.1	99	0.00	15.20
48	m	cis-1,3-DICHLOROPROPENE	0.505	0.503	0.4	84	0.00	15.13
49	m	TOLUENE	0.603	0.569	5.6	83	0.00	16.87
50	m	trans-1,3-DICHLOROPROPENE	0.470	0.462	1.7	84	0.00	16.05
51	m	1,1,2-TRICHLOROETHANE	0.288	0.291	-1.0	87	0.00	16.36
52	m	1,3-DICHLOROPROPANE	0.458	0.459	-0.2	86	0.00	16.92
53	I	CHLOROBENZENE-D5	1.000	1.000	0.0	86	0.00	20.14
54	m	2-HEXANONE	0.749	0.817	-9.1	104	0.00	17.38
55	m	TETRACHLOROETHYLENE	0.956	0.869	9.1	86	0.00	18.99
56	m	DIBROMOCHLOROMETHANE	1.359	1.301	4.3	90	0.00	17.66
57	m	1,2-DIBROMOETHANE	1.025	0.911	11.1	85	0.00	18.12
58	m	1,1,1,2-TETRACHLOROETHANE	0.939	0.839	10.6	88	0.00	20.19
59	m	CHLOROBENZENE	1.555	1.377	11.4	87	0.00	20.22
60	m	ETHYLBENZENE	2.409	2.136	11.3	87	0.00	20.90
61	m	m,p-XYLENE	0.925	0.822	11.1	87	0.00	21.24
62	m	o-XYLENE	0.922	0.842	8.7	90	0.00	22.04
63	m	STYRENE	1.304	1.193	8.5	87	0.00	21.85
64	m	NONANE	1.437	1.503	-4.6	101	0.00	22.46
65	m	BROMOFORM	1.160	1.113	4.1	93	0.00	21.33
66	S	4-BROMOFLUOROBENZENE	1.174	1.171	0.3	83	0.00	22.83
67	m	1,1,2,2-TETRACHLOROETHANE	1.042	1.138	-9.2	108	0.00	22.02
68	m	ISOPROPYLBENZENE	2.714	2.592	4.5	92	0.00	23.08
69	m	2-CHLOROTOLUENE	1.822	1.823	-0.1	98	0.00	23.91
70	m	4-ETHYLTOLUENE	2.323	2.379	-2.4	99	0.00	24.24
71	m	1,3,5-TRIMETHYLBENZENE	1.926	2.089	-8.5	103	0.00	24.38
72	m	TERT-BUTYLBENZENE	2.342	2.433	-3.9	102	0.00	25.11
		----------	Amount	Calc.	%Drift	----------		
73	m	1,2,4-TRIMETHYLBENZENE	10.000	12.504	-25.0	111	0.00	25.12
74	m	m-DICHLOROBENZENE	10.000	11.531	-15.3	104	0.00	25.39
		----------	AvgRF	CCRF	%Dev	----------		
75	m	BENZYL CHLORIDE	1.822	1.823	-0.1	98	0.00	23.91
		----------	Amount	Calc.	%Drift	----------		
76	m	p-DICHLOROBENZENE	10.000	11.287	-12.9	102	0.00	25.52
		----------	AvgRF	CCRF	%Dev	----------		
77	m	SEC-BUTYLBENZENE	3.006	3.208	-6.7	103	0.00	25.61
78	m	4-ISOPROPYLTOLUENE	2.384	2.600	-9.1	105	0.00	25.91
		----------	Amount	Calc.	%Drift	----------		
79	m	o-DICHLOROBENZENE	10.000	12.354	-23.5	112	0.00	26.15
80	m	n-BUTYLBENZENE	10.000	13.193	-31.9#	117	0.00	26.64
81	m	HEXACHLOROBUTADIENE	10.000	15.141	-51.4#	155	0.00	29.54
82	m	1,2,4-TRICHLOROBENZENE	10.000	13.987	-39.9#	153	0.01	28.86
83	m	NAPHTHALENE	10.000	12.703	-27.0	131	0.00	29.02

Initial Calibration Verification

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSJ1614-ICV1614
Lab FileID: J32265A.D

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(#) = Out of Range                SPCC's out = 0  CCC's out = 0
 j32262.D   J150714T.M       Wed Jul 15 10:47:32 2015
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Initial Calibration Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSQ1321-ICC1321
Lab FileID: Q30479.D

Response Factor Report MSQ

Method : C:\msdchem\1\METHODS\Q150630T.M (RTE Integrator)
Title : TO15 by GCMS w/DB-1 60 m X .25 mm ID 1.0 um
Last Update : Wed Jul 01 09:36:41 2015
Response via : Initial Calibration

Calibration Files
0.5 =Q30476.D 20 =Q30480.D 2 =Q30477.D 5 =Q30478.D
10 =Q30479.D 30 =Q30481.D 0.2 =Q30475.D 40 =Q30482.D

Compound	0.5	20	2	5	10	30	0.2	40	Avg	%RSD
1) I BROMOCHLOROMETHANE	ISTD									
2) DICHLORODIFL	2.858	2.959	3.223	3.166	3.059	2.890	2.894	2.932	2.998	4.55
3) PROPYLENE	0.937	0.926	1.012	0.979	0.950	0.916	0.978	0.942	0.955	3.38
4) FREON 114	2.943	3.018	3.369	3.316	3.153	2.955	2.983	2.967	3.088	5.54
5) CHLOROMETHAN	1.056	1.022	1.139	1.098	1.053	1.015	1.155	1.043	1.073	4.88
6) VINYL CHLORI	0.698	0.704	0.796	0.805	0.790	0.674		0.692	0.737	7.73
7) 1,3-BUTADIEN	0.888	0.918	0.989	0.971	0.930	0.909	0.981	0.924	0.939	3.93
8) BROMOMETHANE	1.126	1.166	1.279	1.249	1.203	1.153	1.122	1.166	1.183	4.77
9) CHLOROETHANE	0.547	0.576	0.647	0.637	0.597	0.577	0.579	0.593	0.594	5.58
10) ACROLEIN	0.323	0.362	0.263	0.367	0.372	0.362	0.440	0.406	0.362	14.55
11) TRICHLOROFLU	2.672	2.749	3.057	3.016	2.838	2.715	2.755	2.730	2.817	5.11
12) ISOPROPYL AL	1.567	1.655	1.426	1.652	1.609	1.551	1.933	1.689	1.635	8.91
13) ACETONE	1.728	1.403	1.152	1.444	1.384	1.323		1.478	1.416	12.27
14) ACRYLONITRIL	0.747	0.816	0.627	0.822	0.817	0.832	0.962	0.930	0.819	12.63
15) PENTANE	1.239	1.213	1.378	1.371	1.264	1.204	1.372	1.216	1.282	6.07
16) 1,1-DICHLORO	1.135	1.212	1.353	1.326	1.249	1.211	1.166	1.240	1.237	5.98
17) CARBON DISUL	3.724	3.852	4.189	4.120	3.944	3.794	3.805	3.859	3.911	4.20
18) ETHANOL	0.521	0.284	0.299	0.300	0.278	0.266		0.291	0.320	27.92
19) BROMOETHENE	1.154	1.205	1.324	1.296	1.236	1.199	1.160	1.222	1.224	4.90
20) METHYLENE CH	1.522	1.116	1.280	1.211	1.152	1.101	1.812	1.139	1.292	19.42
21) 3-CHLOROPROP	0.929	0.962	0.978	0.991	1.012	0.969	0.978	1.010	0.979	2.77
22) FREON 113	1.958	2.079	2.321	2.257	2.149	2.046	2.055	2.101	2.121	5.59
23) TRANS-1,2-DI	1.181	1.270	1.380	1.353	1.292	1.268	1.246	1.311	1.288	4.83
24) TERTIARY BUT	1.839	2.222	1.776	2.099	2.139	2.081	2.220	2.247	2.078	8.56
25) METHYL TERTI	2.402	2.935	2.230	2.834	2.817	2.770	3.107	3.073	2.771	11.13
26) TETRAHYDROFU	0.987	1.221	0.914	1.177	1.163	1.146	1.324	1.280	1.152	12.07
27) HEXANE	1.969	1.907	1.985	2.037	1.943	1.830		1.887	1.937	3.53
28) VINYL ACETAT	2.638	3.005	2.168	2.832	2.850	2.862	3.885	3.208	2.931	16.72
29) 1,1-DICHLORO	2.083	2.199	2.110	2.279	2.299	2.252	2.303	2.295	2.227	3.96
30) METHYL ETHYL	1.796	2.147	1.515	2.034	1.998	1.996	2.290	2.244	2.003	12.57
31) cis-1,2-DICH	1.403	1.308	1.346	1.341	1.349	1.302	1.738	1.355	1.393	10.26
32) ETHYL ACETAT	3.179	3.537	2.948	3.547	3.472	3.250	4.010	3.525	3.434	9.21
33) CHLOROFORM	2.386	2.529	2.439	2.564	2.602	2.487	2.512	2.577	2.512	2.90
34) 1,1,1-TRICHL	2.260	2.430	2.365	2.465	2.477	2.408	2.476	2.501	2.423	3.26
35) CARBON TETRA	2.341	2.611	2.638	2.701	2.650	2.557	2.460	2.649	2.576	4.66
36) 1,2-DICHLORO	1.263	1.418	1.155	1.403	1.419	1.438	1.480	1.512	1.386	8.54
37) I 1,4-DIFLUOROBENZENE	ISTD									
38) BENZENE	0.751	0.841	0.701	0.854	0.884	0.807	0.960	0.878	0.834	9.73
39) CYCLOHEXANE	0.353	0.379	0.406	0.408	0.401	0.358	0.401	0.387	0.387	5.57
40) TRICHLOROETH	0.425	0.423	0.456	0.459	0.457	0.387	0.443	0.413	0.433	5.90
41) 1,2-DICHLORO	0.271	0.324	0.254	0.325	0.328	0.308	0.376	0.340	0.316	12.19
42) BROMODICHLOR	0.541	0.601	0.511	0.598	0.627	0.588	0.614	0.616	0.587	6.89
43) 2,2,4-TRIMET	1.368	1.461	1.378	1.548	1.542	1.336	1.598	1.442	1.459	6.59
44) 1,4-DIOXANE	0.123	0.145	0.107	0.138	0.138	0.126	0.155	0.146	0.135	11.31
45) METHYL METHA	0.246	0.336	0.219	0.309	0.324	0.297	0.342	0.352	0.303	15.66

Initial Calibration Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSQ1321-ICC1321
Lab FileID: Q30479.D

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46) HEPTANE       0.480 0.535 0.496 0.566 0.568 0.488 0.562 0.532 0.529   6.82
47) METHYL ISOBU  0.409 0.543 0.370 0.499 0.520 0.482 0.556 0.562 0.493  14.24
48) cis-1,3-DICH  0.412 0.498 0.374 0.486 0.507 0.475 0.527 0.520 0.475  11.35
49) TOLUENE       0.473 0.570 0.434 0.571 0.568 0.518 0.698 0.582 0.552  14.46
50) trans-1,3-DI  0.350 0.431 0.309 0.415 0.428 0.404 0.456 0.449 0.405  12.54
51) 1,1,2-TRICHL  0.250 0.291 0.224 0.287 0.294 0.273 0.330 0.300 0.281  11.48
52) 1,3-DICHLORO  0.380 0.454 0.349 0.459 0.459 0.410 0.520 0.459 0.436  12.40

53) I   CHLOROBENZENE-D5      -----------------ISTD---------------------
54) 2-HEXANONE    0.826 0.914 0.659 0.853 0.909 0.805 1.103 0.882 0.869  14.35
55) TETRACHLOROE  0.881 0.856 0.872 0.918 0.931 0.785 1.035 0.790 0.883   9.16
56) DIBROMOCHLOR  1.105 1.224 1.010 1.202 1.308 1.156 1.305 1.162 1.184   8.42
57) 1,2-DIBROMOE  0.939 1.024 0.836 1.024 1.067 0.957 1.194 0.980 1.003  10.40
58) 1,1,1,2-TETR  0.726 0.797 0.684 0.814 0.842 0.730 0.925 0.740 0.782   9.96
59) CHLOROBENZEN  1.424 1.485 1.282 1.541 1.572 1.355 1.873 1.381 1.489  12.28
60) ETHYLBENZENE  2.128 2.407 1.960 2.476 2.484 2.108 2.953 2.241 2.345  13.22
61) m,p-XYLENE    0.830 0.911 0.748 0.940 0.944 0.785 1.164 0.836 0.895  14.53
62) o-XYLENE      0.789 0.863 0.724 0.895 0.901 0.742 1.087 0.788 0.849  13.80
63) STYRENE       1.052 1.344 0.987 1.302 1.349 1.172 1.453 1.267 1.241  12.81
64) NONANE        1.306 1.364 1.229 1.428 1.501 1.231 1.595 1.228 1.360  10.17
65) BROMOFORM     0.947 1.047 0.795 1.006 1.078 0.987 1.141 1.009 1.001  10.21
66) 4-BROMOFLUOR  1.143 1.087 1.131 1.146 1.115 1.039 1.133 1.004 1.100   4.77
67) 1,1,2,2-TETR  1.207 1.085 0.929 1.134 1.149 0.943 1.591 0.975 1.127  18.97
68) ISOPROPYLBEN  2.286 2.543 2.119 2.609 2.626 2.175 3.165 2.306 2.478  13.67
69) 2-CHLOROTOLU  1.558 1.682 1.389 1.706 1.730 1.475 2.081 1.546 1.646  12.89
70) 4-ETHYLTOLUE  2.002 2.277 1.827 2.308 2.340 1.928 2.772 2.059 2.189  13.76
71) 1,3,5-TRIMET  1.788 2.012 1.658 2.051 2.064 1.715 2.453 1.825 1.946  13.20
72) TERT-BUTYLBE  1.803 1.937 1.618 1.992 2.012 1.627 2.469 1.694 1.894  14.82
73) 1,2,4-TRIMET  1.596 1.727 1.429 1.788 1.796 1.458 2.175 1.519 1.686  14.49
74) m-DICHLOROBE  1.139 1.082 0.877 1.093 1.116 0.956 1.518 0.984 1.096  17.61
75) BENZYL CHLOR  1.271 1.225 0.857 1.167 1.218 1.061 1.712 1.127 1.205  20.11
76) p-DICHLOROBE  1.115 1.053 0.813 1.041 1.065 0.932 1.509 0.968 1.062  19.19
77) SEC-BUTYLBEN  2.423 2.596 2.145 2.654 2.662 2.205 3.315 2.323 2.540  14.59
78) 4-ISOPROPYLT  2.098 2.265 1.837 2.281 2.313 1.912 2.836 2.022 2.196  14.25
79) o-DICHLOROBE  1.019 0.927 0.737 0.923 0.940 0.808 1.353 0.849 0.944  19.80
80) n-BUTYLBENZE  1.721 1.755 1.348 1.711 1.784 1.499 2.374 1.582 1.722  17.55
81) HEXACHLOROBU  0.787 0.507 0.398 0.480 0.490 0.433       0.441 0.505  25.68
82) 1,2,4-TRICHL  0.675 0.420 0.264 0.364 0.391 0.355       0.373 0.406  31.53
            ---- Linear regression ----  Coefficient =  0.9935
              Response Ratio = 0.01035 + 0.37078 *A

83) NAPHTHALENE   1.996 1.158 0.678 0.979 1.046 0.955       1.017 1.118  36.99
            ---- Linear regression ----  Coefficient =  0.9914
              Response Ratio = 0.02597 + 1.00793 *A

---------------------------------------------------------------------------
(#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          Q150630T.M        Thu Jul 02 09:03:54 2015
```

Initial Calibration Verification

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSQ1322-ICV1321
Lab FileID: Q30484A.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\Q150701\Q30484a.D Vial: 2
Acq On : 1 Jul 2015 10:19 am Operator: akina
Sample : icv1321-10(m398) Inst : MSQ
Misc : ms34734,msq1322,,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\METHODS\Q150630T.M (RTE Integrator)
Title : TO15 by GCMS w/DB-1 60 m X .25 mm ID 1.0 um
Last Update : Wed Jul 01 09:36:41 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	BROMOCHLOROMETHANE	1.000	1.000	0.0	98	0.00	9.16
2	m	DICHLORODIFLUOROMETHANE	2.998	3.135	-4.6	101	-0.01	3.99
3	m	PROPYLENE	0.955	1.015	-6.3	105	-0.01	3.92
4	m	FREON 114	3.088	3.188	-3.2	99	0.00	4.25
5	m	CHLOROMETHANE	1.073	1.098	-2.3	102	0.00	4.15
6	m	VINYL CHLORIDE	0.737	0.759	-3.0	94	-0.01	4.37
7	m	1,3-BUTADIENE	0.939	0.973	-3.6	103	-0.01	4.51
8	m	BROMOMETHANE	1.183	1.226	-3.6	100	0.00	4.79
9	m	CHLOROETHANE	0.594	0.616	-3.7	101	0.00	4.96
10	m	ACROLEIN	0.362	0.398	-9.9	105	0.00	5.43
11	m	TRICHLOROFLUOROMETHANE	2.817	2.890	-2.6	100	0.00	5.76
12	m	ISOPROPYL ALCOHOL	1.635	1.808	-10.6	110	0.00	5.88
13	m	ACETONE	1.416	1.508	-6.5	107	0.00	5.56
14	m	ACRYLONITRILE	0.819	0.889	-8.5	107	0.00	6.06
15	m	PENTANE	1.282	1.314	-2.5	102	0.00	6.14
16	m	1,1-DICHLOROETHYLENE	1.237	1.270	-2.7	100	0.00	6.45
17	m	CARBON DISULFIDE	3.911	4.073	-4.1	101	0.00	6.93
18	m	ETHANOL	0.320	0.316	1.3	111	0.00	5.13
19	m	BROMOETHENE	1.224	1.256	-2.6	100	0.00	5.32
20	m	METHYLENE CHLORIDE	1.292	1.179	8.7	100	-0.01	6.57
21	m	3-CHLOROPROPENE	0.979	1.009	-3.1	98	0.00	6.71
22	m	FREON 113	2.121	2.147	-1.2	98	0.00	6.88
23	m	TRANS-1,2-DICHLOROETHYLEN	1.288	1.326	-3.0	101	0.00	7.67
24	m	TERTIARY BUTYL ALCOHOL	2.078	2.389	-15.0	110	0.00	6.53
25	m	METHYL TERTIARY BUTYL ETH	2.771	3.065	-10.6	107	0.00	7.97
26	m	TETRAHYDROFURAN	1.152	1.311	-13.8	111	0.00	9.84
27	m	HEXANE	1.937	2.076	-7.2	105	-0.01	9.22
28	m	VINYL ACETATE	2.931	3.240	-10.5	112	0.00	8.07
29	m	1,1-DICHLOROETHANE	2.227	2.348	-5.4	100	0.00	7.90
30	m	METHYL ETHYL KETONE	2.003	2.260	-12.8	111	0.00	8.38
31	m	cis-1,2-DICHLOROETHYLENE	1.393	1.384	0.6	101	0.00	8.95
32	m	ETHYL ACETATE	3.434	3.806	-10.8	108	-0.01	9.22
33	m	CHLOROFORM	2.512	2.640	-5.1	100	0.00	9.33
34	m	1,1,1-TRICHLOROETHANE	2.423	2.538	-4.7	101	0.00	10.66
35	m	CARBON TETRACHLORIDE	2.576	2.744	-6.5	102	0.00	11.52
36	m	1,2-DICHLOROETHANE	1.386	1.509	-8.9	104	0.00	10.31
37	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	102	0.00	11.82
38	m	BENZENE	0.834	0.910	-9.1	105	0.00	11.30
39	m	CYCLOHEXANE	0.387	0.403	-4.1	103	0.00	11.69
40	m	TRICHLOROETHYLENE	0.433	0.452	-4.4	101	0.00	12.85
41	m	1,2-DICHLOROPROPANE	0.316	0.358	-13.3	111	0.00	12.49

Initial Calibration Verification

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSQ1322-ICV1321
Lab FileID: Q30484A.D

42	m	BROMODICHLOROMETHANE	0.587	0.630	-7.3	103	0.00	12.79
43	m	2,2,4-TRIMETHYLPENTANE	1.459	1.605	-10.0	106	0.00	12.91
44	m	1,4-DIOXANE	0.135	0.151	-11.9	112	0.00	12.85
45	m	METHYL METHACRYLATE	0.303	0.356	-17.5	112	0.00	13.17
46	m	HEPTANE	0.529	0.592	-11.9	106	0.00	13.33
47	m	METHYL ISOBUTYL KETONE	0.493	0.586	-18.9	115	0.00	14.27
48	m	cis-1,3-DICHLOROPROPENE	0.475	0.537	-13.1	108	0.00	14.20
49	m	TOLUENE	0.552	0.639	-15.8	115	0.00	15.79
50	m	trans-1,3-DICHLOROPROPENE	0.405	0.467	-15.3	111	0.00	15.05
51	m	1,1,2-TRICHLOROETHANE	0.281	0.319	-13.5	111	0.00	15.33
52	m	1,3-DICHLOROPROPANE	0.436	0.505	-15.8	112	0.00	15.84
53	I	CHLOROBENZENE-D5	1.000	1.000	0.0	104	0.00	18.88
54	m	2-HEXANONE	0.869	1.025	-18.0	118	0.00	16.27
55	m	TETRACHLOROETHYLENE	0.883	0.941	-6.6	106	0.00	17.75
56	m	DIBROMOCHLOROMETHANE	1.184	1.314	-11.0	105	0.00	16.50
57	m	1,2-DIBROMOETHANE	1.003	1.123	-12.0	110	0.00	16.92
58	m	1,1,1,2-TETRACHLOROETHANE	0.782	0.889	-13.7	110	0.00	18.93
59	m	CHLOROBENZENE	1.489	1.663	-11.7	110	0.00	18.96
60	m	ETHYLBENZENE	2.345	2.748	-17.2	115	0.00	19.61
61	m	m,p-XYLENE	0.895	1.041	-16.3	115	0.00	19.93
62	m	o-XYLENE	0.849	0.993	-17.0	115	0.00	20.68
63	m	STYRENE	1.241	1.498	-20.7	116	0.00	20.51
64	m	NONANE	1.360	1.597	-17.4	111	0.00	21.10
65	m	BROMOFORM	1.001	1.138	-13.7	110	0.00	20.00
66	S	4-BROMOFLUOROBENZENE	1.100	1.154	-4.9	108	0.00	21.41
67	m	1,1,2,2-TETRACHLOROETHANE	1.127	1.257	-11.5	114	0.00	20.66
68	m	ISOPROPYLBENZENE	2.478	2.891	-16.7	115	0.00	21.64
69	m	2-CHLOROTOLUENE	1.646	1.918	-16.5	116	0.00	22.39
70	m	4-ETHYLTOLUENE	2.189	2.614	-19.4	117	0.00	22.71
71	m	1,3,5-TRIMETHYLBENZENE	1.946	2.317	-19.1	117	0.00	22.84
72	m	TERT-BUTYLBENZENE	1.894	2.238	-18.2	116	0.00	23.49
73	m	1,2,4-TRIMETHYLBENZENE	1.686	2.008	-19.1	117	0.00	23.50
74	m	m-DICHLOROBENZENE	1.096	1.225	-11.8	115	0.00	23.72
75	m	BENZYL CHLORIDE	1.205	1.377	-14.3	118	0.00	23.70
76	m	p-DICHLOROBENZENE	1.062	1.180	-11.1	116	0.00	23.84
77	m	SEC-BUTYLBENZENE	2.540	2.976	-17.2	117	0.00	23.94
78	m	4-ISOPROPYLTOLUENE	2.196	2.588	-17.9	117	0.00	24.21
79	m	o-DICHLOROBENZENE	0.944	1.039	-10.1	115	0.00	24.39
80	m	n-BUTYLBENZENE	1.722	2.007	-16.6	117	0.00	24.91
81	m	HEXACHLOROBUTADIENE	0.505	0.570	-12.9	121	0.00	27.71
			Amount	Calc.	%Drift			
82	m	1,2,4-TRICHLOROBENZENE	10.000	12.304	-23.0	125	0.00	27.12
83	m	NAPHTHALENE	10.000	12.381	-23.8	127	0.00	27.26

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Q30479.D Q150630T.M Thu Jul 02 11:02:20 2015

Continuing Calibration Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSQ1324-CC1321
Lab FileID: Q30525.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\Q150705\Q30525.D Vial: 2
Acq On : 5 Jul 2015 8:06 am Operator: akina
Sample : CC1321-10(m398) Inst : MSQ
Misc : ms34755,msq1324,,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\METHODS\Q150630T.M (RTE Integrator)
Title : TO15 by GCMS w/DB-1 60 m X .25 mm ID 1.0 um
Last Update : Wed Jul 01 09:36:41 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	BROMOCHLOROMETHANE	1.000	1.000	0.0	86	-0.01	9.15
2	m	DICHLORODIFLUOROMETHANE	2.998	3.002	-0.1	84	0.00	4.00
3	m	PROPYLENE	0.955	0.890	6.8	81	0.00	3.92
4	m	FREON 114	3.088	3.019	2.2	82	0.00	4.26
5	m	CHLOROMETHANE	1.073	1.246	-16.1	102	0.00	4.16
6	m	VINYL CHLORIDE	0.737	0.672	8.8	73	-0.01	4.37
7	m	1,3-BUTADIENE	0.939	1.010	-7.6	93	-0.01	4.51
8	m	BROMOMETHANE	1.183	1.183	0.0	85	0.00	4.79
9	m	CHLOROETHANE	0.594	0.574	3.4	83	0.00	4.96
10	m	ACROLEIN	0.362	0.359	0.8	83	0.00	5.43
11	m	TRICHLOROFLUOROMETHANE	2.817	2.914	-3.4	88	0.00	5.76
12	m	ISOPROPYL ALCOHOL	1.635	1.592	2.6	85	0.07	5.95
13	m	ACETONE	1.416	1.540	-8.8	96	0.00	5.56
14	m	ACRYLONITRILE	0.819	0.810	1.1	85	0.00	6.06
15	m	PENTANE	1.282	1.258	1.9	86	0.00	6.14
16	m	1,1-DICHLOROETHYLENE	1.237	1.204	2.7	83	0.00	6.45
17	m	CARBON DISULFIDE	3.911	3.883	0.7	85	0.00	6.93
18	m	ETHANOL	0.320	0.314	1.9	97	0.07	5.20
19	m	BROMOETHENE	1.224	1.215	0.7	85	0.00	5.32
20	m	METHYLENE CHLORIDE	1.292	1.120	13.3	84	-0.01	6.57
21	m	3-CHLOROPROPENE	0.979	1.057	-8.0	90	0.00	6.71
22	m	FREON 113	2.121	2.111	0.5	85	0.00	6.88
23	m	TRANS-1,2-DICHLOROETHYLEN	1.288	1.265	1.8	84	0.00	7.67
24	m	TERTIARY BUTYL ALCOHOL	2.078	1.994	4.0	80	0.07	6.60
25	m	METHYL TERTIARY BUTYL ETH	2.771	2.780	-0.3	85	-0.01	7.96
26	m	TETRAHYDROFURAN	1.152	1.147	0.4	85	0.00	9.84
27	m	HEXANE	1.937	1.976	-2.0	88	-0.01	9.22
28	m	VINYL ACETATE	2.931	2.828	3.5	85	0.00	8.07
29	m	1,1-DICHLOROETHANE	2.227	2.287	-2.7	86	0.00	7.90
30	m	METHYL ETHYL KETONE	2.003	2.019	-0.8	87	0.00	8.38
31	m	cis-1,2-DICHLOROETHYLENE	1.393	1.312	5.8	84	-0.01	8.94
32	m	ETHYL ACETATE	3.434	3.506	-2.1	87	-0.01	9.22
33	m	CHLOROFORM	2.512	2.598	-3.4	86	-0.01	9.32
34	m	1,1,1-TRICHLOROETHANE	2.423	2.509	-3.5	87	-0.01	10.65
35	m	CARBON TETRACHLORIDE	2.576	2.698	-4.7	88	-0.01	11.51
36	m	1,2-DICHLOROETHANE	1.386	1.594	-15.0	97	-0.01	10.30
37	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	98	-0.01	11.81
38	m	BENZENE	0.834	0.838	-0.5	93	-0.01	11.30
39	m	CYCLOHEXANE	0.387	0.350	9.6	86	0.00	11.69
40	m	TRICHLOROETHYLENE	0.433	0.382	11.8	82	-0.01	12.85
41	m	1,2-DICHLOROPROPANE	0.316	0.300	5.1	90	-0.01	12.49

Continuing Calibration Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSQ1324-CC1321
Lab FileID: Q30525.D

42	m	BROMODICHLOROMETHANE	0.587	0.574	2.2	90	0.00	12.79
43	m	2,2,4-TRIMETHYLPENTANE	1.459	1.429	2.1	91	-0.01	12.91
44	m	1,4-DIOXANE	0.135	0.123	8.9	87	0.00	12.87
45	m	METHYL METHACRYLATE	0.303	0.290	4.3	88	0.00	13.17
46	m	HEPTANE	0.529	0.511	3.4	88	-0.01	13.32
47	m	METHYL ISOBUTYL KETONE	0.493	0.455	7.7	86	0.00	14.28
48	m	cis-1,3-DICHLOROPROPENE	0.475	0.471	0.8	91	-0.01	14.19
49	m	TOLUENE	0.552	0.515	6.7	89	-0.01	15.79
50	m	trans-1,3-DICHLOROPROPENE	0.405	0.395	2.5	90	0.00	15.06
51	m	1,1,2-TRICHLOROETHANE	0.281	0.265	5.7	88	0.00	15.34
52	m	1,3-DICHLOROPROPANE	0.436	0.412	5.5	88	0.00	15.85
53	I	CHLOROBENZENE-D5	1.000	1.000	0.0	96	0.00	18.88
54	m	2-HEXANONE	0.869	0.788	9.3	83	0.00	16.27
55	m	TETRACHLOROETHYLENE	0.883	0.854	3.3	88	-0.01	17.75
56	m	DIBROMOCHLOROMETHANE	1.184	1.269	-7.2	93	0.00	16.51
57	m	1,2-DIBROMOETHANE	1.003	1.011	-0.8	91	0.00	16.93
58	m	1,1,1,2-TETRACHLOROETHANE	0.782	0.799	-2.2	91	0.00	18.93
59	m	CHLOROBENZENE	1.489	1.487	0.1	91	0.00	18.96
60	m	ETHYLBENZENE	2.345	2.251	4.0	87	0.00	19.61
61	m	m,p-XYLENE	0.895	0.855	4.5	87	0.00	19.93
62	m	o-XYLENE	0.849	0.807	4.9	86	0.00	20.68
63	m	STYRENE	1.241	1.256	-1.2	90	0.00	20.51
64	m	NONANE	1.360	1.411	-3.7	90	0.00	21.10
65	m	BROMOFORM	1.001	1.106	-10.5	99	0.00	20.00
66	S	4-BROMOFLUOROBENZENE	1.100	1.051	4.5	91	0.00	21.41
67	m	1,1,2,2-TETRACHLOROETHANE	1.127	1.197	-6.2	100	0.00	20.66
68	m	ISOPROPYLBENZENE	2.478	2.382	3.9	87	0.00	21.64
69	m	2-CHLOROTOLUENE	1.646	1.705	-3.6	95	0.00	22.39
70	m	4-ETHYLTOLUENE	2.189	2.196	-0.3	90	0.00	22.70
71	m	1,3,5-TRIMETHYLBENZENE	1.946	1.912	1.7	89	0.00	22.84
72	m	TERT-BUTYLBENZENE	1.894	1.943	-2.6	93	0.00	23.49
73	m	1,2,4-TRIMETHYLBENZENE	1.686	1.775	-5.3	95	0.00	23.50
74	m	m-DICHLOROBENZENE	1.096	1.173	-7.0	101	0.00	23.72
75	m	BENZYL CHLORIDE	1.205	1.293	-7.3	102	0.00	23.70
76	m	p-DICHLOROBENZENE	1.062	1.123	-5.7	101	0.00	23.83
77	m	SEC-BUTYLBENZENE	2.540	2.595	-2.2	94	0.00	23.94
78	m	4-ISOPROPYLTOLUENE	2.196	2.100	4.4	87	0.00	24.20
79	m	o-DICHLOROBENZENE	0.944	1.029	-9.0	105	0.00	24.39
80	m	n-BUTYLBENZENE	1.722	1.806	-4.9	97	0.00	24.91
81	m	HEXACHLOROBUTADIENE	0.505	0.574	-13.7	113	0.00	27.71
			Amount	Calc.	%Drift			
82	m	1,2,4-TRICHLOROBENZENE	10.000	10.389	-3.9	97	0.00	27.12
83	m	NAPHTHALENE	10.000	7.848	21.5	75	0.00	27.26

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Q30479.D Q150630T.M Mon Jul 06 10:25:07 2015

Initial Calibration Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSQ1338-ICC1338
Lab FileID: Q30799.D

Response Factor Report MSQ

Method : C:\msdchem\1\METHODS\Q150724T.M (RTE Integrator)
Title : TO15 by GCMS w/DB-1 60 m X .25 mm ID 1.0 um
Last Update : Mon Jul 27 10:51:52 2015
Response via : Initial Calibration

Calibration Files
0.5 =Q30805.D 20 =Q30802.D 2 =Q30804.D 5 =Q30803.D
10 =Q30799.D 30 =Q30801.D 0.2 =Q30806.D 40 =Q30800.D

Compound	0.5	20	2	5	10	30	0.2	40	Avg	%RSD
1) I BROMOCHLOROMETHANE	ISTD									
2) DICHLORODIFL	2.352	3.394	1.960	2.873	2.903	2.995			2.863	2.763	16.90
3) PROPYLENE	0.563	0.773	0.451	0.664	0.633	0.686			0.652	0.632	16.03
4) FREON 114	2.184	3.147	1.851	2.711	2.692	2.790			2.656	2.576	16.55
5) CHLOROMETHAN	0.673	0.892	0.543	0.768	0.769	0.798			0.759	0.743	14.72
6) VINYL CHLORI	0.790	1.120	0.661	0.936	0.957	0.995			0.955	0.916	16.21
7) 1,3-BUTADIEN	0.605	0.905	0.523	0.758	0.763	0.811			0.809	0.739	17.71
8) BROMOMETHANE	0.768	1.133	0.664	0.965	0.975	1.001			0.962	0.924	16.95
9) CHLOROETHANE	0.362	0.515	0.277	0.440	0.416	0.452	0.293	0.441	0.400	20.61
10) ACROLEIN	0.214	0.323	0.149	0.226	0.256	0.307			0.313	0.256	24.96
11) TRICHLOROFLU	2.347	3.386	1.959	2.922	2.819	2.963			2.914	2.759	16.86
12) ISOPROPYL AL			1.367	0.633	0.987	1.088	1.269		1.312	1.109	24.71
---- Linear regression ---- Coefficient = 0.9973											
Response Ratio = -0.16446 + 1.35374 *A											
13) ACETONE			1.541	0.747	1.128	1.225	1.440		1.473	1.259	23.53
14) ACRYLONITRIL	0.592	0.703	0.323	0.506	0.544	0.663			0.692	0.575	23.27
15) PENTANE			1.015	0.600	0.876	0.830	0.890		0.944	0.859	16.55
16) 1,1-DICHLORO	0.805	1.149	0.641	0.975	0.910	1.006	0.729	0.999	0.902	18.47
17) CARBON DISUL	2.387	3.336	1.989	2.834	2.864	2.962			2.987	2.766	15.99
18) ETHANOL			0.262	0.130	0.195	0.216	0.247		0.247	0.216	22.57
19) BROMOETHENE	0.819	1.183	0.686	1.013	0.998	1.049			1.025	0.968	16.89
20) METHYLENE CH	0.800	1.007	0.557	0.839	0.804	0.877			0.885	0.824	16.59
21) 3-CHLOROPROP	0.779	1.132	0.519	0.890	0.873	0.985			1.036	0.888	22.48
22) FREON 113	1.484	2.191	1.146	1.831	1.726	1.894			1.845	1.731	19.23
23) TRANS-1,2-DI	0.805	1.158	0.613	0.949	0.904	1.008	0.709	1.019	0.896	19.91
24) TERTIARY BUT			1.591	0.652	1.088	1.256	1.476		1.524	1.264	27.97
---- Linear regression ---- Coefficient = 0.9972											
Response Ratio = -0.21016 + 1.57913 *A											
25) METHYL TERTI	1.881	2.946	1.351	2.084	2.276	2.750			2.804	2.299	25.10
26) TETRAHYDROFU	0.637	0.959	0.432	0.689	0.753	0.901			0.983	0.765	25.96
27) HEXANE			1.629	0.834	1.324	1.285	1.414		1.464	1.325	20.31
28) VINYL ACETAT			2.007	0.771	1.297	1.920	2.009		2.269	1.712	32.90
---- Linear regression ---- Coefficient = 0.9944											
Response Ratio = -0.45536 + 2.29634 *A											
29) 1,1-DICHLORO	1.411	2.036	0.963	1.589	1.553	1.765	1.255	1.856	1.554	22.14
30) METHYL ETHYL	1.301	1.805	0.757	1.217	1.394	1.700			1.822	1.428	26.87
31) cis-1,2-DICH	0.816	1.201	0.576	0.955	0.937	1.046	0.717	1.062	0.914	22.15
32) ETHYL ACETAT	3.797	3.037	1.381	2.205	2.395	2.777			2.973	2.652	28.63
33) CHLOROFORM	1.894	2.672	1.308	2.129	2.123	2.349	1.656	2.363	2.062	21.01
34) 1,1,1-TRICHL	1.901	2.802	1.370	2.248	2.208	2.459	1.566	2.477	2.129	22.80
35) CARBON TETRA	1.973	2.720	1.303	2.137	2.371	2.427	1.754	2.486	2.146	21.34
36) 1,2-DICHLORO	1.212	1.691	0.745	1.222	1.245	1.521	0.970	1.575	1.273	24.93

Initial Calibration Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSQ1338-ICC1338
Lab FileID: Q30799.D

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37) I   1,4-DIFLUOROBENZENE   ----------------ISTD--------------------
38) BENZENE      0.466 0.729 0.311 0.512 0.510 0.619 0.383 0.645 0.522  26.57
39) CYCLOHEXANE        0.324 0.152 0.251 0.240 0.271       0.275 0.252  22.58
40) TRICHLOROETH 0.351 0.415 0.216 0.332 0.322 0.340 0.318 0.339 0.329  16.68
41) 1,2-DICHLORO 0.163 0.255 0.109 0.175 0.181 0.224       0.237 0.192  26.22
42) BROMODICHLOR 0.632 0.622 0.261 0.437 0.457 0.535       0.549 0.499  25.69
43) 2,2,4-TRIMET       1.195 0.655 0.930 0.996 1.006       1.044 0.971  18.36
44) 1,4-DIOXANE  0.106 0.127 0.043 0.077 0.089 0.114       0.117 0.096  30.07
            ---- Linear regression ----  Coefficient =  0.9937
              Response Ratio = -0.01307 + 0.12060 *A

45) METHYL METHA 0.202 0.283 0.102 0.173 0.205 0.258       0.278 0.214  30.24
            ---- Linear regression ----  Coefficient =  0.9945
              Response Ratio = -0.03750 + 0.28251 *A

46) HEPTANE      0.467 0.449 0.219 0.331 0.337 0.384       0.404 0.370  22.70
47) METHYL ISOBU 0.365 0.325 0.117 0.189 0.238 0.304       0.329 0.267  33.42
            ---- Linear regression ----  Coefficient =  0.9943
              Response Ratio = -0.04729 + 0.33333 *A

48) cis-1,3-DICH 0.288 0.454 0.181 0.300 0.318 0.398       0.413 0.336  27.62
49) TOLUENE      0.318 0.508 0.204 0.340 0.360 0.448 0.264 0.455 0.362  28.49
50) trans-1,3-DI 0.300 0.424 0.161 0.276 0.304 0.377       0.387 0.318  27.57
51) 1,1,2-TRICHL 0.223 0.260 0.108 0.173 0.185 0.229 0.178 0.235 0.199  24.18
52) 1,3-DICHLORO 0.297 0.418 0.170 0.279 0.302 0.368       0.376 0.316  25.82

53) I   CHLOROBENZENE-D5      ----------------ISTD--------------------
54) 2-HEXANONE   0.518 0.436 0.150 0.273 0.360 0.429       0.446 0.373  33.44
            ---- Linear regression ----  Coefficient =  0.9974
              Response Ratio = -0.05670 + 0.45515 *A

55) TETRACHLOROE 0.617 0.787 0.422 0.646 0.655 0.689 0.519 0.644 0.622  17.63
56) DIBROMOCHLOR 0.992 1.226 0.531 0.894 0.976 1.104       1.056 0.969  22.69
57) 1,2-DIBROMOE 0.768 0.921 0.406 0.673 0.712 0.832       0.805 0.731  22.51
58) 1,1,1,2-TETR 0.631 0.765 0.356 0.568 0.625 0.689 0.526 0.661 0.603  20.45
59) CHLOROBENZEN 1.168 1.314 0.650 0.993 1.052 1.177       1.126 1.069  19.71
60) ETHYLBENZENE 1.827 2.092 1.023 1.557 1.678 1.920 1.475 1.838 1.676  19.70
61) m,p-XYLENE   0.680 0.796 0.393 0.597 0.638 0.724 0.527 0.687 0.630  19.91
62) o-XYLENE     0.671 0.766 0.383 0.575 0.614 0.690 0.568 0.647 0.614  18.49
63) STYRENE      0.886 0.950 0.410 0.665 0.752 0.882       0.850 0.771  24.05
64) NONANE       1.210 1.097 0.560 0.829 0.886 0.996       0.980 0.937  22.28
65) BROMOFORM    1.443 1.197 0.514 0.847 0.965 1.085       1.041 1.013  28.61
66) 4-BROMOFLUOR 0.997 0.978 0.984 1.013 1.015 0.942 0.963 0.885 0.972   4.41
67) 1,1,2,2-TETR 2.316 1.157 0.564 0.850 0.929 1.040 1.874 0.989 1.215  47.90
            ---- Quadratic regression ----  Coefficient =  0.9947
              Response Ratio = -0.05935 + 1.19466 *A + -0.04561 *A^2

68) ISOPROPYLBEN 2.534 2.328 1.164 1.731 1.862 2.116       2.006 1.963  22.66
69) 2-CHLOROTOLU 2.182 1.698 0.840 1.263 1.347 1.540       1.468 1.477  27.90
70) 4-ETHYLTOLUE       2.178 1.029 1.592 1.738 1.990       1.889 1.736  23.11
71) 1,3,5-TRIMET       1.922 0.926 1.407 1.517 1.741       1.633 1.524  22.50
72) TERT-BUTYLBE       1.952 0.963 1.451 1.567 1.752       1.638 1.554  21.63
73) 1,2,4-TRIMET       1.805 0.864 1.314 1.441 1.636       1.538 1.433  22.69
74) m-DICHLOROBE       1.233 0.586 0.899 0.982 1.113       1.052 0.978  22.82
75) BENZYL CHLOR       1.322 0.523 0.863 1.065 1.236       1.210 1.036  28.84
76) p-DICHLOROBE       1.194 0.548 0.845 0.931 1.081       1.028 0.938  24.08
77) SEC-BUTYLBEN       2.568 1.243 1.885 2.047 2.330       2.203 2.046  22.38
78) 4-ISOPROPYLT       2.050 0.930 1.457 1.611 1.867       1.771 1.614  24.31
79) o-DICHLOROBE       1.134 0.543 0.817 0.889 1.030       0.976 0.898  22.90
80) n-BUTYLBENZE       1.699 0.744 1.169 1.331 1.575       1.526 1.341  25.89
```

Initial Calibration Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSQ1338-ICC1338
Lab FileID: Q30799.D

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81) HEXACHLOROBU       0.663 0.306 0.466 0.516 0.600       0.551 0.517  23.92
82) 1,2,4-TRICHL       0.490 0.182 0.307 0.353 0.458       0.435 0.371  30.96
            ---- Quadratic regression ----  Coefficient =  0.9955
              Response Ratio = -0.12138 + 0.58228 *A + -0.02856 *A^2

83) NAPHTHALENE        0.668 0.217 0.399 0.480 0.645       0.626 0.506  34.85
            ---- Linear regression ----  Coefficient =  0.9952
              Response Ratio = -0.10928 + 0.66866 *A

---------------------------------------------------------------------------
(#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          Q150724T.M        Mon Jul 27 10:52:45 2015
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Initial Calibration Verification

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSQ1338-ICV1338
Lab FileID: Q30808.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\Q150723\Q30808.D Vial: 3
Acq On : 25 Jul 2015 2:22 am Operator: akina
Sample : icv1338-10(m039) Inst : MSQ
Misc : ms34882,msq1338,,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\METHODS\Q150724T.M (RTE Integrator)
Title : TO15 by GCMS w/DB-1 60 m X .25 mm ID 1.0 um
Last Update : Mon Jul 27 10:51:52 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	BROMOCHLOROMETHANE	1.000	1.000	0.0	102	0.00	9.15
2	m	DICHLORODIFLUOROMETHANE	2.763	2.976	-7.7	105	0.00	3.99
3	m	PROPYLENE	0.632	0.696	-10.1	112	0.00	3.92
4	m	FREON 114	2.576	2.763	-7.3	105	0.00	4.25
5	m	CHLOROMETHANE	0.743	0.804	-8.2	107	0.00	4.15
6	m	VINYL CHLORIDE	0.916	0.993	-8.4	106	0.00	4.37
7	m	1,3-BUTADIENE	0.739	0.798	-8.0	107	0.00	4.51
8	m	BROMOMETHANE	0.924	0.987	-6.8	103	0.00	4.79
9	m	CHLOROETHANE	0.400	0.431	-7.7	106	0.00	4.96
10	m	ACROLEIN	0.256	0.278	-8.6	111	0.00	5.42
11	m	TRICHLOROFLUOROMETHANE	2.759	2.920	-5.8	106	0.00	5.76
			Amount	Calc.	%Drift			
12	m	ISOPROPYL ALCOHOL	10.000	11.873	-18.7	135	0.00	5.81
			AvgRF	CCRF	%Dev			
13	m	ACETONE	1.259	1.374	-9.1	114	0.00	5.56
14	m	ACRYLONITRILE	0.575	0.620	-7.8	116	0.00	6.05
15	m	PENTANE	0.859	0.914	-6.4	112	0.00	6.14
16	m	1,1-DICHLOROETHYLENE	0.902	0.955	-5.9	107	0.00	6.45
17	m	CARBON DISULFIDE	2.766	3.031	-9.6	108	0.00	6.93
18	m	ETHANOL	0.216	0.253	-17.1	120	0.00	5.05
19	m	BROMOETHENE	0.968	1.019	-5.3	104	0.00	5.32
20	m	METHYLENE CHLORIDE	0.824	0.844	-2.4	107	0.00	6.57
21	m	3-CHLOROPROPENE	0.888	0.928	-4.5	108	0.00	6.71
22	m	FREON 113	1.731	1.769	-2.2	104	0.00	6.87
23	m	TRANS-1,2-DICHLOROETHYLEN	0.896	0.946	-5.6	107	0.00	7.66
			Amount	Calc.	%Drift			
24	m	TERTIARY BUTYL ALCOHOL	10.000	14.031	-40.3#	163	0.00	6.46
			AvgRF	CCRF	%Dev			
25	m	METHYL TERTIARY BUTYL ETH	2.299	2.490	-8.3	112	0.00	7.96
26	m	TETRAHYDROFURAN	0.765	0.887	-15.9	120	0.00	9.84
27	m	HEXANE	1.325	1.380	-4.2	109	0.00	9.21
			Amount	Calc.	%Drift			
28	m	VINYL ACETATE	10.000	11.567	-15.7	117	0.00	8.07
			AvgRF	CCRF	%Dev			
29	m	1,1-DICHLOROETHANE	1.554	1.640	-5.5	108	0.00	7.90
30	m	METHYL ETHYL KETONE	1.428	1.664	-16.5	122	0.00	8.37

Initial Calibration Verification

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSQ1338-ICV1338
Lab FileID: Q30808.D

31	m	cis-1,2-DICHLOROETHYLENE	0.914	0.960	-5.0	104	0.00	8.93
32	m	ETHYL ACETATE	2.652	2.760	-4.1	118	0.00	9.22
33	m	CHLOROFORM	2.062	2.173	-5.4	104	0.00	9.32
34	m	1,1,1-TRICHLOROETHANE	2.129	2.246	-5.5	104	0.00	10.65
35	m	CARBON TETRACHLORIDE	2.146	2.491	-16.1	107	0.00	11.51
36	m	1,2-DICHLOROETHANE	1.273	1.307	-2.7	107	0.00	10.30
37	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	102	0.00	11.80
38	m	BENZENE	0.522	0.537	-2.9	107	0.00	11.29
39	m	CYCLOHEXANE	0.252	0.251	0.4	107	0.00	11.69
40	m	TRICHLOROETHYLENE	0.329	0.324	1.5	102	0.00	12.84
41	m	1,2-DICHLOROPROPANE	0.192	0.196	-2.1	111	0.00	12.48
42	m	BROMODICHLOROMETHANE	0.499	0.463	7.2	103	0.00	12.77
43	m	2,2,4-TRIMETHYLPENTANE	0.971	0.968	0.3	99	0.00	12.91
		----------	Amount	Calc.	%Drift	----------		
44	m	1,4-DIOXANE	10.000	10.582	-5.8	131	0.00	12.83
45	m	METHYL METHACRYLATE	10.000	10.089	-0.9	123	0.00	13.16
		----------	AvgRF	CCRF	%Dev	----------		
46	m	HEPTANE	0.370	0.364	1.6	110	0.00	13.32
		----------	Amount	Calc.	%Drift	----------		
47	m	METHYL ISOBUTYL KETONE	10.000	13.221	-32.2#	168	0.00	14.24
		----------	AvgRF	CCRF	%Dev	----------		
48	m	cis-1,3-DICHLOROPROPENE	0.336	0.331	1.5	106	0.00	14.18
49	m	TOLUENE	0.362	0.374	-3.3	106	0.00	15.78
50	m	trans-1,3-DICHLOROPROPENE	0.318	0.302	5.0	101	0.00	15.04
51	m	1,1,2-TRICHLOROETHANE	0.199	0.190	4.5	105	0.00	15.31
52	m	1,3-DICHLOROPROPANE	0.316	0.308	2.5	104	0.00	15.82
53	I	CHLOROBENZENE-D5	1.000	1.000	0.0	100	0.00	18.86
		----------	Amount	Calc.	%Drift	----------		
54	m	2-HEXANONE	10.000	16.213	-62.1#	190	0.00	16.25
		----------	AvgRF	CCRF	%Dev	----------		
55	m	TETRACHLOROETHYLENE	0.622	0.651	-4.7	100	0.00	17.74
56	m	DIBROMOCHLOROMETHANE	0.969	0.958	1.1	99	0.00	16.48
57	m	1,2-DIBROMOETHANE	0.731	0.720	1.5	102	0.00	16.90
58	m	1,1,1,2-TETRACHLOROETHANE	0.603	0.618	-2.5	99	0.00	18.91
59	m	CHLOROBENZENE	1.069	1.042	2.5	99	0.00	18.94
60	m	ETHYLBENZENE	1.676	1.713	-2.2	103	0.00	19.60
61	m	m,p-XYLENE	0.630	0.643	-2.1	101	0.00	19.92
62	m	o-XYLENE	0.614	0.613	0.2	100	0.00	20.67
63	m	STYRENE	0.771	0.921	-19.5	123	0.00	20.50
64	m	NONANE	0.937	0.931	0.6	106	0.00	21.10
65	m	BROMOFORM	1.013	0.868	14.3	90	0.00	19.99
66	S	4-BROMOFLUOROBENZENE	0.972	0.997	-2.6	99	0.00	21.40
		----------	Amount	Calc.	%Drift	----------		
67	m	1,1,2,2-TETRACHLOROETHANE	10.000	7.631	23.7	89	0.00	20.65
		----------	AvgRF	CCRF	%Dev	----------		
68	m	ISOPROPYLBENZENE	1.963	1.849	5.8	100	0.00	21.63
69	m	2-CHLOROTOLUENE	1.477	1.260	14.7	94	0.00	22.38
70	m	4-ETHYLTOLUENE	1.736	1.682	3.1	97	0.00	22.70
71	m	1,3,5-TRIMETHYLBENZENE	1.524	1.457	4.4	96	0.00	22.83
72	m	TERT-BUTYLBENZENE	1.554	1.525	1.9	98	0.00	23.48

Initial Calibration Verification

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSQ1338-ICV1338
Lab FileID: Q30808.D

73	m	1,2,4-TRIMETHYLBENZENE	1.433	1.373	4.2	96	0.00	23.49
74	m	m-DICHLOROBENZENE	0.978	0.830	15.1	85	0.00	23.71
75	m	BENZYL CHLORIDE	1.036	0.891	14.0	84	0.00	23.69
76	m	p-DICHLOROBENZENE	0.938	0.783	16.5	84	0.00	23.83
77	m	SEC-BUTYLBENZENE	2.046	1.965	4.0	96	0.00	23.92
78	m	4-ISOPROPYLTOLUENE	1.614	1.552	3.8	97	0.00	24.20
79	m	o-DICHLOROBENZENE	0.898	0.732	18.5	83	0.00	24.38
80	m	n-BUTYLBENZENE	1.341	1.298	3.2	98	0.00	24.90
81	m	HEXACHLOROBUTADIENE	0.517	0.454	12.2	88	0.00	27.70
			Amount	Calc.	%Drift			
82	m	1,2,4-TRICHLOROBENZENE	10.000	7.454	25.5	84	0.00	27.11
83	m	NAPHTHALENE	10.000	9.840	1.6	115	0.00	27.25

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Q30799.D Q150724T.M Mon Jul 27 10:52:27 2015

Continuing Calibration Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSQ1339-CC1338
Lab FileID: Q30817A.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\Q150727\Q30817A.D Vial: 3
Acq On : 27 Jul 2015 10:56 am Operator: dougy
Sample : cc1338-10(m039) Inst : MSQ
Misc : ms34882,msq1339,,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\METHODS\Q150724T.M (RTE Integrator)
Title : TO15 by GCMS w/DB-1 60 m X .25 mm ID 1.0 um
Last Update : Mon Jul 27 10:51:52 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	BROMOCHLOROMETHANE	1.000	1.000	0.0	97	0.00	9.15
2	m	DICHLORODIFLUOROMETHANE	2.763	3.071	-11.1	103	0.00	3.99
3	m	PROPYLENE	0.632	0.750	-18.7	116	0.00	3.92
4	m	FREON 114	2.576	2.760	-7.1	100	0.00	4.25
5	m	CHLOROMETHANE	0.743	1.061	-42.8#	134	0.00	4.15
6	m	VINYL CHLORIDE	0.916	1.055	-15.2	107	0.00	4.37
7	m	1,3-BUTADIENE	0.739	0.873	-18.1	112	0.00	4.51
8	m	BROMOMETHANE	0.924	0.987	-6.8	99	0.00	4.79
9	m	CHLOROETHANE	0.400	0.457	-14.2	107	0.00	4.96
10	m	ACROLEIN	0.256	0.277	-8.2	106	0.00	5.42
11	m	TRICHLOROFLUOROMETHANE	2.759	3.040	-10.2	105	0.00	5.76
			Amount	Calc.	%Drift			
12	m	ISOPROPYL ALCOHOL	10.000	12.755	-27.6	140	0.01	5.82
			AvgRF	CCRF	%Dev			
13	m	ACETONE	1.259	1.482	-17.7	118	0.00	5.55
14	m	ACRYLONITRILE	0.575	0.633	-10.1	113	0.00	6.05
15	m	PENTANE	0.859	1.015	-18.2	119	0.00	6.13
16	m	1,1-DICHLOROETHYLENE	0.902	0.959	-6.3	103	0.00	6.45
17	m	CARBON DISULFIDE	2.766	3.127	-13.1	106	0.00	6.93
18	m	ETHANOL	0.216	0.276	-27.8	125	0.01	5.07
19	m	BROMOETHENE	0.968	0.999	-3.2	98	0.00	5.32
20	m	METHYLENE CHLORIDE	0.824	0.870	-5.6	106	0.00	6.57
21	m	3-CHLOROPROPENE	0.888	1.073	-20.8	120	0.00	6.71
22	m	FREON 113	1.731	1.758	-1.6	99	0.00	6.87
23	m	TRANS-1,2-DICHLOROETHYLEN	0.896	0.965	-7.7	104	0.00	7.65
			Amount	Calc.	%Drift			
24	m	TERTIARY BUTYL ALCOHOL	10.000	14.640	-46.4#	163	0.00	6.48
			AvgRF	CCRF	%Dev			
25	m	METHYL TERTIARY BUTYL ETH	2.299	2.527	-9.9	108	0.00	7.96
26	m	TETRAHYDROFURAN	0.765	0.970	-26.8	126	-0.01	9.83
27	m	HEXANE	1.325	1.479	-11.6	112	0.00	9.21
			Amount	Calc.	%Drift			
28	m	VINYL ACETATE	10.000	10.623	-6.2	101	0.00	8.06
			AvgRF	CCRF	%Dev			
29	m	1,1-DICHLOROETHANE	1.554	1.883	-21.2	118	0.00	7.90
30	m	METHYL ETHYL KETONE	1.428	1.798	-25.9	126	0.00	8.37

Continuing Calibration Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSQ1339-CC1338
Lab FileID: Q30817A.D

31	m	cis-1,2-DICHLOROETHYLENE	0.914	0.986	-7.9	103	0.00	8.93
32	m	ETHYL ACETATE	2.652	3.029	-14.2	123	0.00	9.21
33	m	CHLOROFORM	2.062	2.308	-11.9	106	0.00	9.31
34	m	1,1,1-TRICHLOROETHANE	2.129	2.374	-11.5	105	0.00	10.65
35	m	CARBON TETRACHLORIDE	2.146	2.545	-18.6	105	0.00	11.50
36	m	1,2-DICHLOROETHANE	1.273	1.459	-14.6	114	0.00	10.29
37	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	96	0.00	11.80
38	m	BENZENE	0.522	0.588	-12.6	110	0.00	11.29
39	m	CYCLOHEXANE	0.252	0.263	-4.4	105	0.00	11.68
40	m	TRICHLOROETHYLENE	0.329	0.320	2.7	95	0.00	12.84
41	m	1,2-DICHLOROPROPANE	0.192	0.213	-10.9	113	0.00	12.48
42	m	BROMODICHLOROMETHANE	0.499	0.527	-5.6	110	0.00	12.77
43	m	2,2,4-TRIMETHYLPENTANE	0.971	1.089	-12.2	105	0.00	12.90
		----------	Amount	Calc.	%Drift			
44	m	1,4-DIOXANE	10.000	10.781	-7.8	125	0.00	12.83
45	m	METHYL METHACRYLATE	10.000	10.731	-7.3	124	-0.01	13.15
		----------	AvgRF	CCRF	%Dev			
46	m	HEPTANE	0.370	0.408	-10.3	116	0.00	13.32
		----------	Amount	Calc.	%Drift			
47	m	METHYL ISOBUTYL KETONE	10.000	14.278	-42.8#	172	0.00	14.24
		----------	AvgRF	CCRF	%Dev			
48	m	cis-1,3-DICHLOROPROPENE	0.336	0.349	-3.9	105	0.00	14.18
49	m	TOLUENE	0.362	0.382	-5.5	102	0.00	15.77
50	m	trans-1,3-DICHLOROPROPENE	0.318	0.303	4.7	95	0.00	15.03
51	m	1,1,2-TRICHLOROETHANE	0.199	0.199	0.0	103	0.00	15.31
52	m	1,3-DICHLOROPROPANE	0.316	0.323	-2.2	102	0.00	15.82
53	I	CHLOROBENZENE-D5	1.000	1.000	0.0	99	0.00	18.86
		----------	Amount	Calc.	%Drift			
54	m	2-HEXANONE	10.000	16.386	-63.9#	189	0.00	16.25
		----------	AvgRF	CCRF	%Dev			
55	m	TETRACHLOROETHYLENE	0.622	0.633	-1.8	96	0.00	17.74
56	m	DIBROMOCHLOROMETHANE	0.969	0.974	-0.5	99	0.00	16.47
57	m	1,2-DIBROMOETHANE	0.731	0.699	4.4	97	0.00	16.90
58	m	1,1,1,2-TETRACHLOROETHANE	0.603	0.612	-1.5	97	0.00	18.91
59	m	CHLOROBENZENE	1.069	1.010	5.5	95	0.00	18.94
60	m	ETHYLBENZENE	1.676	1.644	1.9	97	0.00	19.60
61	m	m,p-XYLENE	0.630	0.613	2.7	95	0.00	19.92
62	m	o-XYLENE	0.614	0.582	5.2	94	0.00	20.66
63	m	STYRENE	0.771	0.849	-10.1	112	0.00	20.49
64	m	NONANE	0.937	0.976	-4.2	109	0.00	21.09
65	m	BROMOFORM	1.013	0.833	17.8	85	0.00	19.98
66	S	4-BROMOFLUOROBENZENE	0.972	1.001	-3.0	97	0.00	21.39
		----------	Amount	Calc.	%Drift			
67	m	1,1,2,2-TETRACHLOROETHANE	10.000	7.405	25.9	85	0.00	20.65
		----------	AvgRF	CCRF	%Dev			
68	m	ISOPROPYLBENZENE	1.963	1.763	10.2	94	0.00	21.63
69	m	2-CHLOROTOLUENE	1.477	1.206	18.3	89	0.00	22.38
70	m	4-ETHYLTOLUENE	1.736	1.608	7.4	91	0.00	22.70
71	m	1,3,5-TRIMETHYLBENZENE	1.524	1.394	8.5	91	0.00	22.83
72	m	TERT-BUTYLBENZENE	1.554	1.450	6.7	92	0.00	23.48

Continuing Calibration Summary

Job Number: MC40134
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSQ1339-CC1338
Lab FileID: Q30817A.D

73	m	1,2,4-TRIMETHYLBENZENE	1.433	1.309	8.7	90	0.00	23.49
74	m	m-DICHLOROBENZENE	0.978	0.770	21.3	78	0.00	23.71
75	m	BENZYL CHLORIDE	1.036	0.762	26.4	71	0.00	23.69
76	m	p-DICHLOROBENZENE	0.938	0.712	24.1	76	0.00	23.83
77	m	SEC-BUTYLBENZENE	2.046	1.894	7.4	92	0.00	23.92
78	m	4-ISOPROPYLTOLUENE	1.614	1.496	7.3	92	0.00	24.20
79	m	o-DICHLOROBENZENE	0.898	0.694	22.7	77	0.00	24.38
80	m	n-BUTYLBENZENE	1.341	1.276	4.8	95	0.00	24.89
81	m	HEXACHLOROBUTADIENE	0.517	0.453	12.4	87	0.00	27.70
			Amount	Calc.	%Drift			
82	m	1,2,4-TRICHLOROBENZENE	10.000	7.243	27.6	80	0.00	27.11
83	m	NAPHTHALENE	10.000	9.233	7.7	105	0.00	27.25

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Q30799.D Q150724T.M Mon Jul 27 11:59:09 2015

New England ACCUTEST LABORATORIES

12/23/15

Technical Report for

GEI Consultants, Inc.

GEI Tufts Street Somerville MA

045163

Accutest Job Number: MC43041

Sampling Date: 11/19/15

Report to:

GEI Consultants, Inc.

CMalagrida@geiconsultants.com

ATTN: Catherine Malagrida

Total number of pages in report: **61**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Reza Tand
Lab Director

Client Service contact: Frank DAgostino 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) WI (399080220) DoD ELAP (L-A-B L2235)

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Test results relate only to samples analyzed.

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Sample Summary

GEI Consultants, Inc.

Job No: MC43041

GEI Tufts Street Somerville MA
Project No: 045163

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC43041-1	11/19/15	11:35	MLK	11/20/15	AQ	Ground Water	045163-MW118D
MC43041-2	11/19/15	10:05	MLK	11/20/15	AQ	Ground Water	045163-MW121D
MC43041-3	11/19/15	10:40	MLK	11/20/15	AQ	Ground Water	045163-MW122

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	GEI Consultants, Inc.	**Job No**	MC43041
Site:	GEI Tufts Street Somerville MA	**Report Date**	12/8/2015 3:13:11 PM

3 Sample(s) were collected on 11/19/2015 and were received at Accutest on 11/20/2015 properly preserved, at 0.6 Deg. C and intact. These Samples received an Accutest job number of MC43041. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260C

Matrix: AQ **Batch ID:** MSG5557

- All method blanks for this batch meet method specific criteria.
- MC43041-3 for Naphthalene: Continuing Calibration Check Standard MSG5557-CC5527exceed 20% difference (biased low). Reporting Limit response verified by low-level standard.
- MC43041-3: Sample was reanalyzed outside of holding time.
- The response factor (RF) for Acetone at low point (0.04) and average point (0.06) in the initial calibration MSG5527-ICC5527 are less than the required RF of 0.1 as noted in Table 4 of SW846 8260C.

Matrix: AQ **Batch ID:** MSH2567

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Initial calibration verification MSH2557-ICV2557 dichlorodifluoromethane exceed 30% Difference (biased high). Associated samples are non-detect for this compound.
- MC43041-1,2 for 1,4-Dioxane: Continuing calibration check standard MSH2567-CC2557 exceed 20% Difference (biased low). Reporting Limit response verified by low-level standard.
- Continuing calibration check standard MSH2567-CC2557 for 1,2-dibromo-3-chloropropane, 1,2,4-trichlorobenzene (>40%), naphthalene (>40%), 1,2,3-trichlorobenzene(>40%), acetone exceed 20% Difference (biased high). Associated samples are nondetect for this compound
- MSH2567-BS/BSD for Naphthalene: Outside control limits. Associated samples may be high biased for this compound.
- MSH2567-BS/BSD for 1,2,3-Trichlorobenzene: Outside control limits. Associated samples are non-detect for this compound.
- The response factor (RF) for the Acetone, 2-Butanone low point (0.06, 0.047) and average point (0.054, 0.058) in the initial calibration MSH2557-ICC2557 are less than the required RF of 0.1 as noted in Table 4 of SW846 8260C.
- Quadratic regression is employed for initial calibration standard in batch MSH2557-ICC2557 for bromoform.

Accutest may not have met all requested limits due to methodology limitations, sample matrix, dilutions, or percents solids.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety.The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(MC43041).

Summary of Hits

Job Number: MC43041
Account: GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA
Collected: 11/19/15

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC43041-1	**045163-MW118D**					
Chloroethane		4.8	2.0	0.91	ug/l	SW846 8260C
1,1-Dichloroethane		39.3	1.0	0.28	ug/l	SW846 8260C
1,1-Dichloroethene		1.6	1.0	0.28	ug/l	SW846 8260C
cis-1,2-Dichloroethene		5.6	1.0	0.54	ug/l	SW846 8260C
trans-1,2-Dichloroethene		2.2	1.0	0.55	ug/l	SW846 8260C
Methyl Tert Butyl Ether		0.89 J	1.0	0.35	ug/l	SW846 8260C
Tetrachloroethene		39.7	1.0	0.21	ug/l	SW846 8260C
Trichloroethene		17.6	1.0	0.25	ug/l	SW846 8260C
Vinyl chloride		1.9	1.0	0.45	ug/l	SW846 8260C
MC43041-2	**045163-MW121D**					
1,1-Dichloroethane		35.9	1.0	0.28	ug/l	SW846 8260C
1,1-Dichloroethene		14.5	1.0	0.28	ug/l	SW846 8260C
cis-1,2-Dichloroethene		73.6	1.0	0.54	ug/l	SW846 8260C
Methyl Tert Butyl Ether		1.6	1.0	0.35	ug/l	SW846 8260C
Tetrachloroethene		164	1.0	0.21	ug/l	SW846 8260C
1,1,1-Trichloroethane		0.56 J	1.0	0.42	ug/l	SW846 8260C
Trichloroethene		148	1.0	0.25	ug/l	SW846 8260C
Vinyl chloride		7.5	1.0	0.45	ug/l	SW846 8260C
MC43041-3	**045163-MW122**					
2-Butanone (MEK)		17.3 J	20	5.9	ug/l	SW846 8260C
1,1-Dichloroethane		6.8	2.0	0.57	ug/l	SW846 8260C
1,1-Dichloroethene		1.6 J	2.0	0.57	ug/l	SW846 8260C
cis-1,2-Dichloroethene		75.7	2.0	1.1	ug/l	SW846 8260C
Methyl Tert Butyl Ether		1.0 J	2.0	0.70	ug/l	SW846 8260C
Methylene chloride		1.1 J	4.0	0.54	ug/l	SW846 8260C
Tetrachloroethene		326	2.0	0.41	ug/l	SW846 8260C
Trichloroethene		44.9	2.0	0.50	ug/l	SW846 8260C
Vinyl chloride		1.2 J	2.0	0.90	ug/l	SW846 8260C

New England ACCUTEST LABORATORIES

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Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	045163-MW118D		
Lab Sample ID:	MC43041-1	**Date Sampled:**	11/19/15
Matrix:	AQ - Ground Water	**Date Received:**	11/20/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	GEI Tufts Street Somerville MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H77089.D	1	12/03/15	KP	n/a	n/a	MSH2567
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA MCP List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.18	ug/l	
75-25-2	Bromoform	ND	1.0	0.39	ug/l	
74-83-9	Bromomethane	ND	2.0	1.3	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	3.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.9	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.50	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	1.2	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.76	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	4.8	2.0	0.91	ug/l	
67-66-3	Chloroform	ND	1.0	0.40	ug/l	
74-87-3	Chloromethane	ND	2.0	0.49	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.60	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.46	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.79	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	2.8	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.61	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.24	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.24	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.37	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.53	ug/l	
75-34-3	1,1-Dichloroethane	39.3	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.68	ug/l	
75-35-4	1,1-Dichloroethene	1.6	1.0	0.28	ug/l	
156-59-2	cis-1,2-Dichloroethene	5.6	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	2.2	1.0	0.55	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: 045163-MW118D
Lab Sample ID: MC43041-1
Matrix: AQ - Ground Water
Method: SW846 8260C
Project: GEI Tufts Street Somerville MA

Date Sampled: 11/19/15
Date Received: 11/20/15
Percent Solids: n/a

VOA MCP List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.63	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.7	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.72	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.27	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane [a]	ND	100	20	ug/l	
60-29-7	Ethyl Ether	ND	5.0	0.69	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	10	4.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.61	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.32	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.89	1.0	0.35	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	2.4	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.27	ug/l	
91-20-3	Naphthalene	ND	5.0	0.61	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.57	ug/l	
100-42-5	Styrene	ND	5.0	1.1	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	1.0	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.73	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.48	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.29	ug/l	
127-18-4	Tetrachloroethene	39.7	1.0	0.21	ug/l	
109-99-9	Tetrahydrofuran	ND	10	4.9	ug/l	
108-88-3	Toluene	ND	1.0	0.66	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.78	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.7	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.42	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.76	ug/l	
79-01-6	Trichloroethene	17.6	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.47	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.39	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.2	ug/l	
75-01-4	Vinyl chloride	1.9	1.0	0.45	ug/l	
	m,p-Xylene	ND	1.0	0.82	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	045163-MW118D		
Lab Sample ID:	MC43041-1	**Date Sampled:**	11/19/15
Matrix:	AQ - Ground Water	**Date Received:**	11/20/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	GEI Tufts Street Somerville MA		

VOA MCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		79-127%
2037-26-5	Toluene-D8	100%		80-116%
460-00-4	4-Bromofluorobenzene	100%		77-124%

(a) Continuing Calibration Confirmation outside of acceptance criteria. Reporting Limit response verified by low-level standard.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	045163-MW121D		
Lab Sample ID:	MC43041-2	**Date Sampled:**	11/19/15
Matrix:	AQ - Ground Water	**Date Received:**	11/20/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	GEI Tufts Street Somerville MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H77090.D	1	12/03/15	KP	n/a	n/a	MSH2567
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA MCP List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.18	ug/l	
75-25-2	Bromoform	ND	1.0	0.39	ug/l	
74-83-9	Bromomethane	ND	2.0	1.3	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	3.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.9	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.50	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	1.2	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.76	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.91	ug/l	
67-66-3	Chloroform	ND	1.0	0.40	ug/l	
74-87-3	Chloromethane	ND	2.0	0.49	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.60	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.46	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.79	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	2.8	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.61	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.24	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.24	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.37	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.53	ug/l	
75-34-3	1,1-Dichloroethane	35.9	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.68	ug/l	
75-35-4	1,1-Dichloroethene	14.5	1.0	0.28	ug/l	
156-59-2	cis-1,2-Dichloroethene	73.6	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.55	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	045163-MW121D		
Lab Sample ID:	MC43041-2	**Date Sampled:**	11/19/15
Matrix:	AQ - Ground Water	**Date Received:**	11/20/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	GEI Tufts Street Somerville MA		

VOA MCP List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.63	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.7	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.72	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.27	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane [a]	ND	100	20	ug/l	
60-29-7	Ethyl Ether	ND	5.0	0.69	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	10	4.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.61	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.32	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.6	1.0	0.35	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	2.4	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.27	ug/l	
91-20-3	Naphthalene	ND	5.0	0.61	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.57	ug/l	
100-42-5	Styrene	ND	5.0	1.1	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	1.0	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.73	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.48	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.29	ug/l	
127-18-4	Tetrachloroethene	164	1.0	0.21	ug/l	
109-99-9	Tetrahydrofuran	ND	10	4.9	ug/l	
108-88-3	Toluene	ND	1.0	0.66	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.78	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.7	ug/l	
71-55-6	1,1,1-Trichloroethane	0.56	1.0	0.42	ug/l	J
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.76	ug/l	
79-01-6	Trichloroethene	148	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.47	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.39	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.2	ug/l	
75-01-4	Vinyl chloride	7.5	1.0	0.45	ug/l	
	m,p-Xylene	ND	1.0	0.82	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	045163-MW121D		
Lab Sample ID:	MC43041-2	**Date Sampled:**	11/19/15
Matrix:	AQ - Ground Water	**Date Received:**	11/20/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	GEI Tufts Street Somerville MA		

VOA MCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		79-127%
2037-26-5	Toluene-D8	103%		80-116%
460-00-4	4-Bromofluorobenzene	101%		77-124%

(a) Continuing Calibration Confirmation outside of acceptance criteria. Reporting Limit response verified by low-level standard.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	045163-MW122		
Lab Sample ID:	MC43041-3	**Date Sampled:**	11/19/15
Matrix:	AQ - Ground Water	**Date Received:**	11/20/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	GEI Tufts Street Somerville MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G148301.D	1	12/04/15	CB	n/a	n/a	MSG5557
Run #2	H77100.D	2	12/03/15	KP	n/a	n/a	MSH2567

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA MCP List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND [a]	1.0	0.54	ug/l	
108-86-1	Bromobenzene	ND [a]	10	0.52	ug/l	
74-97-5	Bromochloromethane	ND [a]	10	0.73	ug/l	
75-27-4	Bromodichloromethane	ND [a]	2.0	0.36	ug/l	
75-25-2	Bromoform	ND [a]	2.0	0.79	ug/l	
74-83-9	Bromomethane	ND [a]	4.0	2.6	ug/l	
78-93-3	2-Butanone (MEK)	17.3 [a]	20	5.9	ug/l	J
104-51-8	n-Butylbenzene	ND [a]	10	3.7	ug/l	
135-98-8	sec-Butylbenzene	ND [a]	10	1.0	ug/l	
98-06-6	tert-Butylbenzene	ND [a]	10	2.4	ug/l	
75-15-0	Carbon disulfide	ND [a]	10	1.5	ug/l	
56-23-5	Carbon tetrachloride	ND [a]	2.0	0.68	ug/l	
108-90-7	Chlorobenzene	ND [a]	2.0	0.47	ug/l	
75-00-3	Chloroethane	ND [a]	4.0	1.8	ug/l	
67-66-3	Chloroform	ND [a]	2.0	0.81	ug/l	
74-87-3	Chloromethane	ND [a]	4.0	0.97	ug/l	
95-49-8	o-Chlorotoluene	ND [a]	10	1.2	ug/l	
106-43-4	p-Chlorotoluene	ND [a]	10	0.92	ug/l	
108-20-3	Di-Isopropyl ether	ND [a]	4.0	1.6	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND [a]	10	5.7	ug/l	
124-48-1	Dibromochloromethane	ND [a]	2.0	1.2	ug/l	
106-93-4	1,2-Dibromoethane	ND [a]	2.0	0.66	ug/l	
95-50-1	1,2-Dichlorobenzene	ND [a]	2.0	0.49	ug/l	
541-73-1	1,3-Dichlorobenzene	ND [a]	2.0	0.48	ug/l	
106-46-7	1,4-Dichlorobenzene	ND [a]	2.0	0.75	ug/l	
75-71-8	Dichlorodifluoromethane	ND [a]	4.0	1.1	ug/l	
75-34-3	1,1-Dichloroethane	6.8 [a]	2.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND [a]	2.0	1.4	ug/l	
75-35-4	1,1-Dichloroethene	1.6 [a]	2.0	0.57	ug/l	J
156-59-2	cis-1,2-Dichloroethene	75.7 [a]	2.0	1.1	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND [a]	2.0	1.1	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	045163-MW122		
Lab Sample ID:	MC43041-3	**Date Sampled:**	11/19/15
Matrix:	AQ - Ground Water	**Date Received:**	11/20/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	GEI Tufts Street Somerville MA		

VOA MCP List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND [a]	4.0	0.43	ug/l	
142-28-9	1,3-Dichloropropane	ND [a]	10	1.3	ug/l	
594-20-7	2,2-Dichloropropane	ND [a]	10	3.4	ug/l	
563-58-6	1,1-Dichloropropene	ND [a]	10	1.4	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND [a]	1.0	0.54	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND [a]	1.0	0.87	ug/l	
123-91-1	1,4-Dioxane	ND	50	20	ug/l	
60-29-7	Ethyl Ether	ND [a]	10	1.4	ug/l	
100-41-4	Ethylbenzene	ND [a]	2.0	0.48	ug/l	
87-68-3	Hexachlorobutadiene	ND [a]	10	2.6	ug/l	
591-78-6	2-Hexanone	ND [a]	20	9.2	ug/l	
98-82-8	Isopropylbenzene	ND [a]	10	1.2	ug/l	
99-87-6	p-Isopropyltoluene	ND [a]	10	0.63	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.0 [a]	2.0	0.70	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND [a]	10	4.7	ug/l	
74-95-3	Methylene bromide	ND [a]	10	0.59	ug/l	
75-09-2	Methylene chloride	1.1 [a]	4.0	0.54	ug/l	J
91-20-3	Naphthalene [b]	ND	5.0	0.61	ug/l	
103-65-1	n-Propylbenzene	ND [a]	10	1.1	ug/l	
100-42-5	Styrene	ND [a]	10	2.1	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND [a]	4.0	2.0	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND [a]	4.0	1.5	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND [a]	2.0	0.95	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND [a]	1.0	0.58	ug/l	
127-18-4	Tetrachloroethene	326 [a]	2.0	0.41	ug/l	
109-99-9	Tetrahydrofuran	ND [a]	20	9.7	ug/l	
108-88-3	Toluene	ND [a]	2.0	1.3	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND [a]	10	1.6	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND [a]	10	3.4	ug/l	
71-55-6	1,1,1-Trichloroethane	ND [a]	2.0	0.84	ug/l	
79-00-5	1,1,2-Trichloroethane	ND [a]	2.0	1.5	ug/l	
79-01-6	Trichloroethene	44.9 [a]	2.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND [a]	2.0	0.94	ug/l	
96-18-4	1,2,3-Trichloropropane	ND [a]	10	0.79	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND [a]	10	0.57	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND [a]	10	2.4	ug/l	
75-01-4	Vinyl chloride	1.2 [a]	2.0	0.90	ug/l	J
	m,p-Xylene	ND [a]	2.0	1.6	ug/l	
95-47-6	o-Xylene	ND [a]	2.0	0.43	ug/l	
1330-20-7	Xylene (total)	ND [a]	2.0	0.43	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	045163-MW122		
Lab Sample ID:	MC43041-3	**Date Sampled:**	11/19/15
Matrix:	AQ - Ground Water	**Date Received:**	11/20/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	GEI Tufts Street Somerville MA		

VOA MCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%	103%	79-127%
2037-26-5	Toluene-D8	101%	97%	80-116%
460-00-4	4-Bromofluorobenzene	107%	98%	77-124%

(a) Result is from Run# 2
(b) Continuing Calibration Confirmation outside of acceptance criteria. Reporting Limit response verified by low-level standard.

New England ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- MCP Form
- Sample Tracking Chronicle
- Internal Chain of Custody

Chain-of-Custody Record

Laboratory: ACCUTEST

Laboratory Job # (Lab use only) MC 43041

GEI Consultants
400 Unicorn Park Drive
Woburn, MA 01801
PH: 781.721.4000
FX: 781.721.4073

Project Information

Project Name: Tufts St.
Project Number: 045163
Project Location: Somerville, MA
Project Manager: Joe Roman
(o) 781-721-4136 (c) 619-977-2951

Send Report to: Jessica Englehart
Send EDD to: labdata@geiconsultants.com

Preservative: HCl

Analysis: VOCs 8260

Sample Handling: Samples Field Filtered — YES (NO) NA

Sampled Shipped With Ice — (YES) NO

MCP PRESUMPTIVE CERTAINTY REQUIRED — (YES) NO

If Yes, Are MCP Analytical Methods Required? (YES) NO NA
If Yes, Are Drinking Water Samples Submitted? YES (NO) NA
If Yes, Have You Met Minimum Field QC Requirements? (YES) NO NA

Lab Sample Number	GEI Sample ID	Collection Date	Collection Time	Matrix	No. of Bottles	Sampler(s) Initials	VOCs 8260	Sample Specific Remarks
~~-1~~	~~045163-MW112A~~			~~GW~~	~~2~~	~~MLK~~	~~X~~ 2 MK	
-1	045163-MW118D	11/19/15	1135	GW	2	MLK	X	
-2	045163-MW121D	11/19/15	1005	GW	2	MLK	X	
-3	045163-MW122	11/19/15	1040	GW	2	MLK	X	

MCP Level Needed: GEI requires the most stringent Method 1 MCP standard be met for all analytes whenever possible.

Turnaround Time (Business days):
Normal __X__ Other ____
10-Day ____ 7-Day ____
5-Day __X__ 3-Day ____

Before submitting rush turnaround samples, you **must** notify the laboratory to confirm that the TAT can be achieved.

Additional Requirements/Comments/Remarks:
351

	Relinquished by: (signature)	Date	Time	Received by: (signature)
1.	Maureen Kelly	~~11/19/15~~ 11/20/15	1233	GEI Sample Fridge
2.	GEI Sample Fridge	11/20/15	1310	Jessica Englehart
3.	Jessica Englehart	11/20/15	1310	
4.		11.20.15	1406	

IRVUN1 0.6°C

11/18/2013
N:\04516\14.0 Field Program\14.4 Sampling Sheets and Surveys\14.4.1 Groundwater Sampling\COC autumn round 2013.xls

MC43041: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC43041 **Client:** GEI **Project:**

Date / Time Received: 11/20/2015 2:06:00 PM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (0.6/0.6);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Thermometer ID:	IRGUN1;		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Accutest Laboratories
V:(508) 481-6200

495 Technology Center West, Bldg One
F: (508) 481-7753

Marlborough, MA 01752
www/accutest.com

MC43041: Chain of Custody
Page 2 of 2

Exhibit VII A-2: MassDEP Analytical Protocol Certification Form

MassDEP Analytical Protocol Certification Form

Laboratory Name:	Accutest Laboratories of New England	Project #:	MC43041
Project Location:	GEI Tufts Street Somerville MA	MADEP RTN	None

This form provides certifications for the following data set: list Laboratory Sample ID Numbers(s)
MC43041-1,MC43041-2,MC43041-3

Matrices: Groundwater/Surface Water (X) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other ( )

CAM Protocol (check all that apply below):

8260 VOC (X) CAM IIA	7470/7471 Hg ( ) CAM III B	MassDEP VPH ( ) CAM IV A	8081 Pesticides ( ) CAM V B	7196 Hex Cr ( ) CAM VI B	Mass DEP APH ( ) CAM IX A
8270 SVOC ( ) CAM II B	7010 Metals ( ) CAM III C	MassDEP EPH ( ) CAM IV B	8151 Herbicides ( ) CAM V C	8330 Explosives ( ) CAM VIII A	TO-15 VOC ( ) CAM IX B
6010 Metals ( ) CAM III A	6020 Metals ( ) CAM III D	8082 PCB ( ) CAM V A	9014 Total Cyanide/PAC ( ) CAM VI A	6860 Perchlorate ( ) CAM VIII B	

Affirmative Responses to Questions A Through F are required for "Presumptive Certainty status

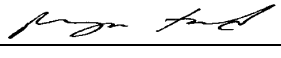
A	Were all samples received in a condition consistent with those described on the Chain-of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☑ Yes	☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes	☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes	☐ No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes	☐ No
E	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☑ Yes ☑ Yes	☐ No ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes	☐ No

Responses to questions G, H, and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols	☐ Yes	☑ No [1]
	Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data useability and representativeness requirements described in 310 CMR 40.1056(2)(k) and WSC-07-350		
H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	☐ Yes	☑ No [1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☑ Yes	☐ No [1]

[1] ***All Negative responses must be addressed in an attached Environmental Laboratory case narrative.***

I the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature:  **Position:** **Laboratory Director**

Printed Name: **Reza Tand** **Date:** **12/08/2015**

Internal Sample Tracking Chronicle

GEI Consultants, Inc.

Job No: MC43041

GEI Tufts Street Somerville MA
Project No: 045163

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC43041-1 Collected: 19-NOV-15 11:35 By: MLK 045163-MW118D				Received: 20-NOV-15	By: BA	
MC43041-1	SW846 8260C	03-DEC-15 17:13	KP			V8260MCP
MC43041-2 Collected: 19-NOV-15 10:05 By: MLK 045163-MW121D				Received: 20-NOV-15	By: BA	
MC43041-2	SW846 8260C	03-DEC-15 17:39	KP			V8260MCP
MC43041-3 Collected: 19-NOV-15 10:40 By: MLK 045163-MW122				Received: 20-NOV-15	By: BA	
MC43041-3	SW846 8260C	03-DEC-15 22:00	KP			V8260MCP
MC43041-3	SW846 8260C	04-DEC-15 19:41	CB			V8260MCP

Accutest Internal Chain of Custody

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA
Received: 11/20/15

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC43041-1.1	VOC Ref #3	Kayla Paradis	12/03/15 14:53	Retrieve from Storage
MC43041-1.1	Kayla Paradis	GCMSH	12/03/15 14:53	Load on Instrument
MC43041-1.1	GCMSH	Kayla Paradis	12/04/15 10:57	Unload from Instrument
MC43041-1.1	Kayla Paradis	VOC Ref #3	12/04/15 10:58	Return to Storage
MC43041-2.2	VOC Ref #3	Kayla Paradis	12/03/15 14:53	Retrieve from Storage
MC43041-2.2	Kayla Paradis	GCMSH	12/03/15 14:53	Load on Instrument
MC43041-2.2	GCMSH	Kayla Paradis	12/04/15 10:57	Unload from Instrument
MC43041-2.2	Kayla Paradis	VOC Ref #3	12/04/15 10:58	Return to Storage
MC43041-3.1	VOC Ref #3	Kayla Paradis	12/03/15 14:53	Retrieve from Storage
MC43041-3.1	Kayla Paradis	GCMSH	12/03/15 14:53	Load on Instrument
MC43041-3.1	GCMSH	Kayla Paradis	12/04/15 10:57	Unload from Instrument
MC43041-3.1	Kayla Paradis	VOC Ref #3	12/04/15 10:58	Return to Storage
MC43041-3.2	VOC Ref #3	Cara Baker	12/04/15 12:50	Retrieve from Storage
MC43041-3.2	Cara Baker	GCMSG	12/04/15 12:50	Load on Instrument
MC43041-3.2	GCMSG	Cara Baker	12/07/15 10:15	Unload from Instrument
MC43041-3.2	Cara Baker	VOC Ref #3	12/07/15 10:16	Return to Storage

New England ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSH2567-MB	H77082.D	1	12/03/15	KP	n/a	n/a	MSH2567

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC43041-1, MC43041-2, MC43041-3

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.18	ug/l	
75-25-2	Bromoform	ND	1.0	0.39	ug/l	
74-83-9	Bromomethane	ND	2.0	1.3	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	3.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.9	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.50	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	1.2	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.76	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.91	ug/l	
67-66-3	Chloroform	ND	1.0	0.40	ug/l	
74-87-3	Chloromethane	ND	2.0	0.49	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.60	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.46	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.79	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	2.8	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.61	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.24	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.24	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.37	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.53	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.68	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.28	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.55	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.63	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.7	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.72	ug/l	

Method Blank Summary

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSH2567-MB	H77082.D	1	12/03/15	KP	n/a	n/a	MSH2567

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC43041-1, MC43041-2, MC43041-3

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.27	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	ND	100	20	ug/l	
60-29-7	Ethyl Ether	ND	5.0	0.69	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	10	4.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.61	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.32	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	2.4	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.27	ug/l	
91-20-3	Naphthalene	ND	5.0	0.61	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.57	ug/l	
100-42-5	Styrene	ND	5.0	1.1	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	1.0	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.73	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.48	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.29	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.21	ug/l	
109-99-9	Tetrahydrofuran	ND	10	4.9	ug/l	
108-88-3	Toluene	ND	1.0	0.66	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.78	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.7	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.42	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.76	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.47	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.39	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.2	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.45	ug/l	
	m,p-Xylene	ND	1.0	0.82	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

Method Blank Summary

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSH2567-MB	H77082.D	1	12/03/15	KP	n/a	n/a	MSH2567

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC43041-1, MC43041-2, MC43041-3

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	79-127%
2037-26-5	Toluene-D8	94%	80-116%
460-00-4	4-Bromofluorobenzene	101%	77-124%

Method Blank Summary

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG5557-MB	G148289.D	1	12/04/15	CB	n/a	n/a	MSG5557

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC43041-3

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
123-91-1	1,4-Dioxane	ND	50	20	ug/l	
91-20-3	Naphthalene	ND	5.0	0.61	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	79-127%
2037-26-5	Toluene-D8	96%	80-116%
460-00-4	4-Bromofluorobenzene	108%	77-124%

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSH2567-BS	H77078.D	1	12/03/15	KP	n/a	n/a	MSH2567
MSH2567-BSD	H77079.D	1	12/03/15	KP	n/a	n/a	MSH2567

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC43041-1, MC43041-2, MC43041-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	66.3	133	67.2	134	1	10-200/25
71-43-2	Benzene	50	47.4	95	52.0	104	9	74-124/25
108-86-1	Bromobenzene	50	47.5	95	50.1	100	5	80-117/25
74-97-5	Bromochloromethane	50	47.8	96	52.3	105	9	73-130/25
75-27-4	Bromodichloromethane	50	48.5	97	52.9	106	9	76-136/25
75-25-2	Bromoform	50	49.2	98	54.3	109	10	63-139/25
74-83-9	Bromomethane	50	51.4	103	54.8	110	6	49-161/25
78-93-3	2-Butanone (MEK)	50	56.4	113	58.4	117	3	44-191/25
104-51-8	n-Butylbenzene	50	50.8	102	54.6	109	7	84-134/25
135-98-8	sec-Butylbenzene	50	49.8	100	53.1	106	6	76-125/25
98-06-6	tert-Butylbenzene	50	50.7	101	53.6	107	6	74-123/25
75-15-0	Carbon disulfide	50	45.7	91	50.2	100	9	45-138/25
56-23-5	Carbon tetrachloride	50	51.8	104	55.4	111	7	64-149/25
108-90-7	Chlorobenzene	50	44.6	89	48.1	96	8	73-114/25
75-00-3	Chloroethane	50	55.5	111	58.5	117	5	43-165/25
67-66-3	Chloroform	50	47.4	95	52.0	104	9	72-132/25
74-87-3	Chloromethane	50	52.8	106	55.4	111	5	30-173/25
95-49-8	o-Chlorotoluene	50	48.3	97	51.1	102	6	75-116/25
106-43-4	p-Chlorotoluene	50	47.8	96	51.0	102	6	78-116/25
108-20-3	Di-Isopropyl ether	50	51.6	103	55.7	111	8	53-153/25
96-12-8	1,2-Dibromo-3-chloropropane	50	67.5	135	73.7	147	9	50-157/25
124-48-1	Dibromochloromethane	50	48.2	96	52.8	106	9	75-133/25
106-93-4	1,2-Dibromoethane	50	44.8	90	48.8	98	9	72-133/25
95-50-1	1,2-Dichlorobenzene	50	48.1	96	52.1	104	8	73-122/25
541-73-1	1,3-Dichlorobenzene	50	46.2	92	50.2	100	8	76-117/25
106-46-7	1,4-Dichlorobenzene	50	47.2	94	50.8	102	7	74-120/25
75-71-8	Dichlorodifluoromethane	50	46.5	93	48.9	98	5	30-180/25
75-34-3	1,1-Dichloroethane	50	46.8	94	51.0	102	9	62-130/25
107-06-2	1,2-Dichloroethane	50	48.2	96	52.9	106	9	65-140/25
75-35-4	1,1-Dichloroethene	50	48.8	98	53.2	106	9	57-132/25
156-59-2	cis-1,2-Dichloroethene	50	50.9	102	55.3	111	8	72-131/25
156-60-5	trans-1,2-Dichloroethene	50	44.5	89	49.0	98	10	69-127/25
78-87-5	1,2-Dichloropropane	50	48.9	98	53.0	106	8	74-130/25
142-28-9	1,3-Dichloropropane	50	47.6	95	50.5	101	6	80-129/25
594-20-7	2,2-Dichloropropane	50	57.6	115	62.1	124	8	54-162/25
563-58-6	1,1-Dichloropropene	50	49.5	99	54.0	108	9	75-116/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSH2567-BS	H77078.D	1	12/03/15	KP	n/a	n/a	MSH2567
MSH2567-BSD	H77079.D	1	12/03/15	KP	n/a	n/a	MSH2567

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC43041-1, MC43041-2, MC43041-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	50	48.6	97	52.0	104	7	86-141/25
10061-02-6	trans-1,3-Dichloropropene	50	46.1	92	48.3	97	5	80-134/25
123-91-1	1,4-Dioxane	250	177	71	224	90	23	32-157/25
60-29-7	Ethyl Ether	50	48.8	98	53.8	108	10	57-146/25
100-41-4	Ethylbenzene	50	47.2	94	50.5	101	7	76-125/25
87-68-3	Hexachlorobutadiene	50	59.5	119	65.0	130	9	64-154/25
591-78-6	2-Hexanone	50	55.5	111	57.7	115	4	35-200/25
98-82-8	Isopropylbenzene	50	49.1	98	51.3	103	4	74-121/25
99-87-6	p-Isopropyltoluene	50	50.0	100	53.5	107	7	84-128/25
1634-04-4	Methyl Tert Butyl Ether	50	51.8	104	56.6	113	9	67-145/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	51.2	102	54.4	109	6	61-155/25
74-95-3	Methylene bromide	50	47.0	94	51.7	103	10	75-124/25
75-09-2	Methylene chloride	50	48.1	96	53.1	106	10	62-137/25
91-20-3	Naphthalene	50	126	252* [a]	135	270* [a]	7	24-164/25
103-65-1	n-Propylbenzene	50	47.1	94	49.7	99	5	76-120/25
100-42-5	Styrene	50	46.1	92	50.9	102	10	74-132/25
994-05-8	tert-Amyl Methyl Ether	50	50.6	101	55.5	111	9	60-137/25
637-92-3	tert-Butyl Ethyl Ether	50	49.7	99	54.2	108	9	58-142/25
630-20-6	1,1,1,2-Tetrachloroethane	50	48.4	97	54.4	109	12	71-136/25
79-34-5	1,1,2,2-Tetrachloroethane	50	51.2	102	54.7	109	7	65-145/25
127-18-4	Tetrachloroethene	50	45.0	90	49.3	99	9	73-122/25
109-99-9	Tetrahydrofuran	50	46.9	94	51.1	102	9	42-159/25
108-88-3	Toluene	50	47.7	95	49.6	99	4	80-122/25
87-61-6	1,2,3-Trichlorobenzene	50	165	330* [b]	176	352* [b]	6	33-170/25
120-82-1	1,2,4-Trichlorobenzene	50	72.0	144	78.4	157	9	43-159/25
71-55-6	1,1,1-Trichloroethane	50	50.3	101	54.6	109	8	68-137/25
79-00-5	1,1,2-Trichloroethane	50	46.4	93	49.3	99	6	76-134/25
79-01-6	Trichloroethene	50	46.0	92	49.4	99	7	80-125/25
75-69-4	Trichlorofluoromethane	50	51.2	102	54.4	109	6	56-166/25
96-18-4	1,2,3-Trichloropropane	50	47.2	94	50.8	102	7	65-147/25
95-63-6	1,2,4-Trimethylbenzene	50	48.6	97	51.7	103	6	79-124/25
108-67-8	1,3,5-Trimethylbenzene	50	51.3	103	54.6	109	6	80-130/25
75-01-4	Vinyl chloride	50	55.4	111	58.0	116	5	39-176/25
	m,p-Xylene	100	93.9	94	102	102	8	75-121/25
95-47-6	o-Xylene	50	45.7	91	50.5	101	10	71-123/25
1330-20-7	Xylene (total)	150	140	93	153	102	9	74-122/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSH2567-BS	H77078.D	1	12/03/15	KP	n/a	n/a	MSH2567
MSH2567-BSD	H77079.D	1	12/03/15	KP	n/a	n/a	MSH2567

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC43041-1, MC43041-2, MC43041-3

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	100%	102%	79-127%
2037-26-5	Toluene-D8	101%	99%	80-116%
460-00-4	4-Bromofluorobenzene	98%	96%	77-124%

(a) Outside control limits. Associated samples may be high biased for this compound.
(b) Outside control limits. Associated samples are non-detect for this compound.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG5557-BS	G148285.D	1	12/04/15	CB	n/a	n/a	MSG5557
MSG5557-BSD	G148286.D	1	12/04/15	CB	n/a	n/a	MSG5557

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC43041-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	37.8	76	37.8	76	0	10-200/25
123-91-1	1,4-Dioxane	250	194	78	212	85	9	32-157/25
91-20-3	Naphthalene	50	29.1	58	28.2	56	3	24-164/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	98%	98%	79-127%
2037-26-5	Toluene-D8	98%	97%	80-116%
460-00-4	4-Bromofluorobenzene	94%	94%	77-124%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample:	MSG5527-BFB	**Injection Date:**	11/12/15
Lab File ID:	G147543.D	**Injection Time:**	09:09
Instrument ID:	GCMSG		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	22600	21.0		Pass
75	30.0 - 60.0% of mass 95	54533	50.7		Pass
95	Base peak, 100% relative abundance	107458	100.0		Pass
96	5.0 - 9.0% of mass 95	7215	6.71		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 100.0% of mass 95	78586	73.1		Pass
175	5.0 - 9.0% of mass 174	5691	5.30	(7.24) [a]	Pass
176	95.0 - 101.0% of mass 174	76821	71.5	(97.8) [a]	Pass
177	5.0 - 9.0% of mass 176	4660	4.34	(6.07) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSG5527-IC5527	G147544.D	11/12/15	09:37	00:28	Initial cal 0.5
MSG5527-IC5527	G147545.D	11/12/15	10:06	00:57	Initial cal 1
MSG5527-IC5527	G147546.D	11/12/15	10:35	01:26	Initial cal 2
MSG5527-IC5527	G147547.D	11/12/15	11:03	01:54	Initial cal 5
MSG5527-IC5527	G147548.D	11/12/15	11:32	02:23	Initial cal 10
MSG5527-IC5527	G147549.D	11/12/15	12:01	02:52	Initial cal 20
MSG5527-ICC5527	G147550.D	11/12/15	12:29	03:20	Initial cal 50
MSG5527-IC5527	G147551.D	11/12/15	12:58	03:49	Initial cal 100
MSG5527-IC5527	G147552.D	11/12/15	13:27	04:18	Initial cal 200
MSG5527-IC5527	G147553.D	11/12/15	13:55	04:46	Initial cal 400
MSG5527-ICV5527	G147556.D	11/12/15	15:21	06:12	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample:	MSG5557-BFB	**Injection Date:**	12/04/15
Lab File ID:	G148284.D	**Injection Time:**	11:32
Instrument ID:	GCMSG		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	23192	21.4		Pass
75	30.0 - 60.0% of mass 95	55000	50.8		Pass
95	Base peak, 100% relative abundance	108320	100.0		Pass
96	5.0 - 9.0% of mass 95	7456	6.88		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 100.0% of mass 95	79080	73.0		Pass
175	5.0 - 9.0% of mass 174	5953	5.50	(7.53) [a]	Pass
176	95.0 - 101.0% of mass 174	77053	71.1	(97.4) [a]	Pass
177	5.0 - 9.0% of mass 176	5449	5.03	(7.07) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSG5557-CC5527	G148284.D	12/04/15	11:32	00:00	Continuing cal 50
MSG5557-BS	G148285.D	12/04/15	12:00	00:28	Blank Spike
MSG5557-BSD	G148286.D	12/04/15	12:28	00:56	Blank Spike Duplicate
MSG5557-MB	G148289.D	12/04/15	13:54	02:22	Method Blank
GP19888-LB1	G148290.D	12/04/15	14:22	02:50	Leachate Blank
ZZZZZZ	G148291.D	12/04/15	14:50	03:18	(unrelated sample)
ZZZZZZ	G148292.D	12/04/15	15:19	03:47	(unrelated sample)
ZZZZZZ	G148293.D	12/04/15	15:53	04:21	(unrelated sample)
ZZZZZZ	G148294.D	12/04/15	16:22	04:50	(unrelated sample)
ZZZZZZ	G148295.D	12/04/15	16:50	05:18	(unrelated sample)
ZZZZZZ	G148296.D	12/04/15	17:19	05:47	(unrelated sample)
ZZZZZZ	G148297.D	12/04/15	17:48	06:16	(unrelated sample)
ZZZZZZ	G148298.D	12/04/15	18:16	06:44	(unrelated sample)
ZZZZZZ	G148299.D	12/04/15	18:45	07:13	(unrelated sample)
ZZZZZZ	G148300.D	12/04/15	19:13	07:41	(unrelated sample)
MC43041-3	G148301.D	12/04/15	19:41	08:09	045163-MW122
ZZZZZZ	G148302.D	12/04/15	20:09	08:37	(unrelated sample)
ZZZZZZ	G148303.D	12/04/15	20:38	09:06	(unrelated sample)
ZZZZZZ	G148304.D	12/04/15	21:06	09:34	(unrelated sample)
ZZZZZZ	G148305.D	12/04/15	21:34	10:02	(unrelated sample)
ZZZZZZ	G148306.D	12/04/15	22:03	10:31	(unrelated sample)
ZZZZZZ	G148308.D	12/04/15	23:01	11:29	(unrelated sample)
GP19888-LS1	G148309.D	12/04/15	23:30	11:58	Leachate Spike

Instrument Performance Check (BFB)

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample:	MSH2557-BFB	**Injection Date:**	11/23/15
Lab File ID:	H76822.D	**Injection Time:**	19:38
Instrument ID:	GCMSH		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	22195	18.7		Pass
75	30.0 - 60.0% of mass 95	58211	48.9		Pass
95	Base peak, 100% relative abundance	118997	100.0		Pass
96	5.0 - 9.0% of mass 95	8562	7.20		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 150.0% of mass 95	106293	89.3		Pass
175	5.0 - 9.0% of mass 174	7535	6.33	(7.09) [a]	Pass
176	95.0 - 101.0% of mass 174	106083	89.1	(99.8) [a]	Pass
177	5.0 - 9.0% of mass 176	6957	5.85	(6.56) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSH2557-IC2557	H76823.D	11/23/15	20:05	00:27	Initial cal 0.5
MSH2557-IC2557	H76824.D	11/23/15	20:30	00:52	Initial cal 1
MSH2557-IC2557	H76825.D	11/23/15	20:56	01:18	Initial cal 2
MSH2557-IC2557	H76826.D	11/23/15	21:22	01:44	Initial cal 5
MSH2557-IC2557	H76827.D	11/23/15	21:48	02:10	Initial cal 10
MSH2557-IC2557	H76828.D	11/23/15	22:14	02:36	Initial cal 20
MSH2557-ICC2557	H76829.D	11/23/15	22:40	03:02	Initial cal 50
MSH2557-IC2557	H76830.D	11/23/15	23:06	03:28	Initial cal 100
MSH2557-IC2557	H76831.D	11/23/15	23:32	03:54	Initial cal 200
MSH2557-IC2557	H76832.D	11/23/15	23:58	04:20	Initial cal 400
MSH2557-ICV2557	H76835.D	11/24/15	01:17	05:39	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSH2567-BFB
Lab File ID: H77077.D
Instrument ID: GCMSH
Injection Date: 12/03/15
Injection Time: 11:57

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	21105	18.4		Pass
75	30.0 - 60.0% of mass 95	55611	48.5		Pass
95	Base peak, 100% relative abundance	114594	100.0		Pass
96	5.0 - 9.0% of mass 95	7572	6.61		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 150.0% of mass 95	102061	89.1		Pass
175	5.0 - 9.0% of mass 174	7442	6.49	(7.29) [a]	Pass
176	95.0 - 101.0% of mass 174	101294	88.4	(99.2) [a]	Pass
177	5.0 - 9.0% of mass 176	7105	6.20	(7.01) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
MSH2567-CC2557	H77078.D	12/03/15	12:23	00:26	Continuing cal 50
MSH2567-BS	H77078.D	12/03/15	12:23	00:26	Blank Spike
MSH2567-BSD	H77079.D	12/03/15	12:49	00:52	Blank Spike Duplicate
MSH2567-MB	H77082.D	12/03/15	14:08	02:11	Method Blank
ZZZZZZ	H77083.D	12/03/15	14:34	02:37	(unrelated sample)
ZZZZZZ	H77084.D	12/03/15	15:00	03:03	(unrelated sample)
ZZZZZZ	H77085.D	12/03/15	15:26	03:29	(unrelated sample)
ZZZZZZ	H77086.D	12/03/15	15:52	03:55	(unrelated sample)
ZZZZZZ	H77087.D	12/03/15	16:18	04:21	(unrelated sample)
MC43041-1	H77089.D	12/03/15	17:13	05:16	045163-MW118D
MC43041-2	H77090.D	12/03/15	17:39	05:42	045163-MW121D
ZZZZZZ	H77091.D	12/03/15	18:05	06:08	(unrelated sample)
ZZZZZZ	H77092.D	12/03/15	18:31	06:34	(unrelated sample)
ZZZZZZ	H77093.D	12/03/15	18:57	07:00	(unrelated sample)
ZZZZZZ	H77094.D	12/03/15	19:23	07:26	(unrelated sample)
ZZZZZZ	H77095.D	12/03/15	19:49	07:52	(unrelated sample)
ZZZZZZ	H77096.D	12/03/15	20:16	08:19	(unrelated sample)
ZZZZZZ	H77097.D	12/03/15	20:41	08:44	(unrelated sample)
ZZZZZZ	H77098.D	12/03/15	21:08	09:11	(unrelated sample)
ZZZZZZ	H77099.D	12/03/15	21:34	09:37	(unrelated sample)
MC43041-3	H77100.D	12/03/15	22:00	10:03	045163-MW122
ZZZZZZ	H77101.D	12/03/15	22:26	10:29	(unrelated sample)

Volatile Internal Standard Area Summary

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Check Std: MSG5557-CC5527 **Injection Date:** 12/04/15
Lab File ID: G148284.D **Injection Time:** 11:32
Instrument ID: GCMSG **Method:** SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	251305	5.10	388276	6.21	202324	9.54	210038	12.16	82964	3.15
Upper Limit [a]	502610	5.60	776552	6.71	404648	10.04	420076	12.66	165928	3.65
Lower Limit [b]	125653	4.60	194138	5.71	101162	9.04	105019	11.66	41482	2.65

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSG5557-BS	257474	5.10	405198	6.22	210363	9.54	217519	12.16	89180	3.16
MSG5557-BSD	261768	5.10	411701	6.22	212286	9.54	218484	12.16	90561	3.15
MSG5557-MB	239308	5.10	351399	6.22	174255	9.54	143442	12.16	79548	3.16
GP19888-LB1	228337	5.10	324702	6.22	166234	9.54	135151	12.16	78223	3.16
ZZZZZZ	221291	5.10	318033	6.22	160996	9.54	129197	12.16	71953	3.16
ZZZZZZ	218275	5.10	305783	6.22	156530	9.54	129349	12.16	72236	3.16
ZZZZZZ	217696	5.10	304538	6.22	156609	9.54	126298	12.17	68141	3.15
ZZZZZZ	211268	5.10	296426	6.22	154238	9.54	126571	12.16	68328	3.16
ZZZZZZ	210157	5.10	293736	6.22	153738	9.54	123454	12.16	67926	3.16
ZZZZZZ	211055	5.10	291605	6.22	154901	9.54	124464	12.16	68300	3.16
ZZZZZZ	207540	5.10	289053	6.22	152416	9.54	123653	12.16	65264	3.16
ZZZZZZ	209430	5.10	288666	6.22	152672	9.54	121917	12.16	63593	3.15
ZZZZZZ	209824	5.10	294889	6.22	156149	9.54	146418	12.16	68896	3.15
ZZZZZZ	218117	5.10	302268	6.22	155164	9.54	125807	12.16	71749	3.15
MC43041-3	215728	5.10	291741	6.22	156371	9.54	126129	12.16	66745	3.15
ZZZZZZ	212718	5.10	291437	6.22	152250	9.54	123665	12.16	67425	3.15
ZZZZZZ	213999	5.10	293100	6.22	152239	9.54	124088	12.16	69697	3.15
ZZZZZZ	211006	5.10	290826	6.22	153354	9.54	124391	12.16	65388	3.15
ZZZZZZ	208131	5.10	291478	6.22	151189	9.54	126583	12.16	69928	3.15
ZZZZZZ	212638	5.10	291871	6.22	152410	9.54	121502	12.16	68279	3.16
ZZZZZZ	215962	5.10	310349	6.22	164927	9.54	159480	12.16	72858	3.15
GP19888-LS1	225240	5.10	336648	6.21	184889	9.54	195505	12.16	75991	3.15

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Check Std:	MSH2567-CC2557	**Injection Date:**	12/03/15
Lab File ID:	H77078.D	**Injection Time:**	12:23
Instrument ID:	GCMSH	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	290269	8.60	408866	9.47	223048	12.73	213904	15.30	101661	6.18
Upper Limit [a]	580538	9.10	817732	9.97	446096	13.23	427808	15.80	203322	6.68
Lower Limit [b]	145135	8.10	204433	8.97	111524	12.23	106952	14.80	50831	5.68

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSH2567-BS	290269	8.60	408866	9.47	223048	12.73	213904	15.30	101661	6.18
MSH2567-BSD	281859	8.60	397249	9.47	210219	12.73	213240	15.29	101201	6.18
MSH2567-MB	266629	8.60	381998	9.47	183008	12.73	179748	15.30	98110	6.18
ZZZZZZ	254615	8.60	361398	9.47	178364	12.73	174085	15.29	89825	6.18
ZZZZZZ	243790	8.60	355416	9.47	171834	12.73	165366	15.30	93255	6.18
ZZZZZZ	238316	8.61	346494	9.48	170064	12.73	160845	15.29	84993	6.18
ZZZZZZ	228510	8.61	330098	9.47	171859	12.73	156142	15.29	83633	6.18
ZZZZZZ	214124	8.60	309155	9.47	161797	12.73	149649	15.29	76628	6.19
MC43041-1	204157	8.61	294645	9.47	152660	12.73	141921	15.30	76325	6.19
MC43041-2	210254	8.60	300679	9.47	163323	12.73	145279	15.29	77256	6.19
ZZZZZZ	199976	8.60	290191	9.47	151610	12.73	142771	15.30	76044	6.18
ZZZZZZ	195907	8.60	284948	9.47	149675	12.73	137728	15.30	76523	6.18
ZZZZZZ	202973	8.60	295117	9.47	150329	12.73	141748	15.29	84339	6.18
ZZZZZZ	202189	8.60	293446	9.47	165413	12.73	161052	15.30	87157	6.18
ZZZZZZ	216501	8.60	317402	9.47	158157	12.73	166835	15.30	92468	6.18
ZZZZZZ	219395	8.60	314598	9.47	167329	12.73	173070	15.29	92718	6.18
ZZZZZZ	227005	8.60	326099	9.47	173835	12.73	176810	15.30	84843	6.18
ZZZZZZ	226428	8.60	326977	9.47	163764	12.73	170495	15.29	73364	6.18
ZZZZZZ	244128	8.61	354782	9.47	172097	12.73	181261	15.30	80932	6.19
MC43041-3	259091	8.60	375436	9.47	180073	12.73	179744	15.29	74602	6.19
ZZZZZZ	251595	8.60	363724	9.47	170638	12.73	172554	15.29	68836	6.18

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Method: SW846 8260C **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC43041-1	H77089.D	109	100	100
MC43041-2	H77090.D	107	103	101
MC43041-3	G148301.D	103	101	107
MC43041-3	H77100.D	103	97	98
MSG5557-BS	G148285.D	98	98	94
MSG5557-BSD	G148286.D	98	97	94
MSG5557-MB	G148289.D	100	96	108
MSH2567-BS	H77078.D	100	101	98
MSH2567-BSD	H77079.D	102	99	96
MSH2567-MB	H77082.D	102	94	101

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	79-127%
S2 = Toluene-D8	80-116%
S3 = 4-Bromofluorobenzene	77-124%

Initial Calibration Summary

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSG5527-ICC5527
Lab FileID: G147550.D

Response Factor Report MSG

Method : C:\msdchem\1\METHODS\g151112w.m (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Fri Nov 13 13:02:58 2015
Response via : Initial Calibration

Calibration Files
0.5 =G147544.D 1 =G147545.D 2 =G147546.D 5 =G147547.D
10 =G147548.D 20 =G147549.D 50 =G147550.D 100 =G147551.D
200 =G147552.D 400 =G147553.D = =

Compound	0.5	1	2	5	10	20	50	100	200	400	Avg	%RSD
1) I tert butyl alcohol-d9 ----------ISTD----------												
2) tertiary butyl alcohol	1.138	1.171	1.289	1.362	1.166	1.273	1.284	1.276			1.245	6.21
3) Ethanol	0.098	0.098	0.099	0.103	0.093	0.101	0.107	0.126			0.103	9.72
4) I pentafluorobenzene ----------ISTD----------												
5) dichlorodifluoromethane	0.662	0.899	0.997	1.013	1.049	1.154	1.228	1.133			1.017	17.35
6) chloromethane	0.597	0.630	0.729	0.716	0.644	0.680	0.654	0.517			0.646	10.53
7) vinyl chloride	0.346	0.377	0.529	0.622	0.594	0.575	0.632	0.674	0.555		0.545	20.66
---- Linear regression ---- Coefficient = 0.9922												
Response Ratio = -0.00526 + 0.59998 *A												
8) bromomethane	0.289	0.352	0.428	0.425	0.395	0.429	0.466	0.427			0.401	13.93
9) chloroethane	0.145	0.228	0.281	0.290	0.273	0.305	0.335	0.307			0.271	21.96
---- Linear regression ---- Coefficient = 0.9975												
Response Ratio = -0.00785 + 0.31417 *A												
10) ethyl ether	0.361	0.361	0.385	0.358	0.409	0.397	0.384				0.379	5.25
11) acetonitrile	0.240	0.207	0.189	0.151	0.160	0.164	0.168				0.183	17.43
12) trichlorofluoromethane	0.607	0.563	0.813	1.008	0.895	0.895	0.946	0.993	0.896		0.846	18.84
13) freon-113	0.536	0.562	0.586	0.494	0.636	0.615	0.597				0.575	8.44
14) acrolein	0.019	0.025	0.027	0.024	0.027	0.029	0.026				0.025#	12.85
15) 1,1-dichloroethene	0.294	0.347	0.455	0.479	0.523	0.455	0.523	0.508	0.502		0.454	17.82
16) acetone	0.040	0.060	0.065	0.059	0.068	0.065	0.063				0.060#	15.66
17) Methyl Acetate	0.391	0.362	0.353	0.351	0.403	0.387	0.386				0.376	5.46
18) methylene chloride	0.414	0.487	0.473	0.515	0.455	0.529	0.507	0.498			0.485	7.68
19) methyl tert butyl ether	1.111	1.140	1.216	1.232	1.308	1.205	1.391	1.329	1.317		1.250	7.42
20) acrylonitrile												

Initial Calibration Summary

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSG5527-ICC5527
Lab FileID: G147550.D

```
                          0.202 0.188 0.200 0.177 0.203 0.192 0.185  0.192    5.06
21)  allyl chloride
                          0.569 0.549 0.609 0.516 0.618 0.586 0.568  0.573    6.08
22)  trans-1,2-dichloroethene
               0.249 0.346 0.485 0.477 0.525 0.457 0.535 0.515 0.513  0.456   21.09
             ---- Linear regression ----  Coefficient =  0.9989
               Response Ratio = -0.00562 + 0.51469 *A

23)  iodomethane
                          0.821 0.829 0.887 0.797 0.933 0.884 0.872  0.860    5.44
24)  carbon disulfide
                          1.238 1.244 1.393 1.258 1.516 1.505 1.518  1.382    9.67
25)  propionitrile
                          0.063 0.065 0.066 0.066 0.075 0.069 0.072  0.068    6.30
26)  vinyl acetate
                          0.766 0.704 0.751 0.691 0.782 0.735 0.699  0.733    4.89
27)  chloroprene
                          0.820 0.808 0.913 0.777 0.960 0.931 0.899  0.873    8.02
28)  di-isopropyl ether
                     1.312 1.375 1.390 1.474 1.314 1.531 1.449 1.417  1.408    5.42
29)  methacrylonitrile
                          0.360 0.293 0.355 0.305 0.364 0.343 0.330  0.336    8.21
30)  2-butanone
                          0.042 0.048 0.048 0.045 0.054 0.053 0.052  0.049#   9.07
31)  Ethyl Acetate
                                                                     0.000#  -1.00
32)  Hexane
                          0.581 0.492 0.554 0.429 0.494 0.495 0.437  0.497   11.16
33)  1,1-dichloroethane
               0.645 0.704 0.937 0.928 0.990 0.871 1.022 0.958 0.952  0.890   14.57
34)  tert-butyl ethyl ether
                     1.307 1.507 1.450 1.603 1.431 1.659 1.589 1.589  1.517    7.64
35)  isobutyl alcohol
                                                                     0.000#  -1.00
36)  2,2-dichloropropane
                          0.577 0.556 0.625 0.540 0.633 0.601 0.584  0.588    5.79
37)  cis-1,2-dichloroethene
               0.374 0.437 0.507 0.500 0.550 0.487 0.568 0.541 0.542  0.501   12.36
38)  bromochloromethane
                          0.262 0.274 0.283 0.260 0.306 0.286 0.284  0.279    5.59
39)  chloroform
               0.763 0.783 0.947 0.980 1.055 0.916 1.088 1.009 0.987  0.947   11.78
40)  dibromofluoromethane (s)
          0.514 0.512 0.512 0.510 0.515 0.514 0.525 0.529 0.526 0.517  0.517    1.29
41)  Tetrahydrofuran
                          0.163 0.140 0.130 0.123 0.132 0.125 0.127  0.134   10.27
42)  1,1,1-trichloroethane
               0.444 0.515 0.689 0.682 0.779 0.715 0.860 0.835 0.830  0.705   20.50
             ---- Linear regression ----  Coefficient =  0.9984
               Response Ratio = -0.01180 + 0.82925 *A


43) I   1,4-difluorobenzene   ----------------ISTD---------------------
44)  Cyclohexane
                          0.488 0.448 0.507 0.419 0.459 0.446 0.426  0.456    6.96
45)  carbon tetrachloride
               0.232 0.287 0.408 0.419 0.502 0.465 0.571 0.574        0.432   28.64
             ---- Quadratic regression ----  Coefficient =  0.9976
               Response Ratio = -0.00703 + 0.49357 *A + 0.02222 *A^2
```

Initial Calibration Summary

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSG5527-ICC5527
Lab FileID: G147550.D

46) 1,1-dichloropropene
0.440 0.425 0.483 0.411 0.475 0.462 0.446 0.449 5.83
47) benzene
1.030 0.884 0.874 1.075 1.096 1.181 1.020 1.178 1.114 1.093 1.055 10.10
48) 1,2-dichloroethane
0.531 0.574 0.671 0.693 0.741 0.652 0.733 0.665 0.601 0.651 10.85
49) tert-amyl methyl ether
0.603 0.692 0.708 0.777 0.707 0.822 0.791 0.788 0.736 9.77
50) heptane
0.772 0.755 0.847 0.713 0.808 0.789 0.709 0.770 6.49
51) trichloroethene
0.275 0.241 0.274 0.336 0.363 0.396 0.339 0.386 0.364 0.341 0.332 15.58
52) 1,2-dichloropropane
0.258 0.292 0.291 0.322 0.287 0.331 0.313 0.309 0.300 7.78
53) dibromomethane
0.196 0.216 0.209 0.240 0.215 0.246 0.231 0.219 0.222 7.49
54) bromodichloromethane
0.288 0.347 0.409 0.431 0.489 0.469 0.567 0.542 0.537 0.453 20.68
---- Linear regression ---- Coefficient = 0.9981
Response Ratio = -0.00812 + 0.53842 *A

55) Methylcyclohexane
0.437 0.436 0.510 0.412 0.493 0.488 0.455 0.462 7.84
56) 2-chloroethyl vinyl ether
0.074 0.100 0.122 0.128 0.154 0.175 0.177 0.133 28.78
---- Linear regression ---- Coefficient = 0.9954
Response Ratio = -0.01476 + 0.17365 *A

57) methyl methacrylate
0.161 0.159 0.193 0.183 0.219 0.207 0.205 0.190 12.18
58) 1,4-dioxane
0.002 0.002 0.002 0.003 0.003 0.004 0.003# 22.77
---- Linear regression ---- Coefficient = 0.9929
Response Ratio = -0.00229 + 0.00347 *A

59) cis-1,3-dichloropropene
0.295 0.244 0.319 0.388 0.429 0.492 0.460 0.563 0.399 27.06
---- Quadratic regression ---- Coefficient = 0.9978
Response Ratio = -0.00222 + 0.41962 *A + 0.06976 *A^2

60) toluene-d8 (s)
1.141 1.140 1.138 1.137 1.148 1.152 1.169 1.158 1.185 1.173 1.154 1.44
61) 4-methyl-2-pentanone
0.350 0.404 0.444 0.428 0.495 0.489 0.474 0.441 11.74
62) toluene
0.769 0.647 0.763 0.755 0.801 0.707 0.828 0.794 0.770 0.759 7.10
63) trans-1,3-dichloropropene
0.242 0.241 0.277 0.380 0.411 0.487 0.476 0.572 0.386 32.09
---- Quadratic regression ---- Coefficient = 0.9985
Response Ratio = -0.00287 + 0.41970 *A + 0.07587 *A^2

64) 1,1,2-trichloroethane
0.169 0.183 0.217 0.224 0.232 0.217 0.250 0.236 0.226 0.217 11.83
65) ethyl methacrylate
0.273 0.302 0.350 0.338 0.400 0.385 0.373 0.346 13.15

66) I chlorobenzene-d5 ----------ISTD----------
67) tetrachloroethene
0.565 0.434 0.506 0.633 0.637 0.722 0.602 0.703 0.675 0.641 0.612 14.56
68) 1,3-dichloropropane

Initial Calibration Summary

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSG5527-ICC5527
Lab FileID: G147550.D

```
                          0.843 0.809 0.933 0.836 0.975 0.910 0.874  0.883    6.72
69)  dibromochloromethane
          0.340 0.320 0.450 0.472 0.524 0.639 0.636 0.803 0.799        0.554   32.25
           ---- Quadratic regression ----  Coefficient =  0.9957
             Response Ratio = -0.00615 + 0.65099 *A + 0.04111 *A^2

70)  1,2-dibromoethane
                     0.448 0.552 0.558 0.614 0.565 0.663 0.628 0.612  0.580   11.36
71)  2-hexanone
                          0.378 0.413 0.483 0.456 0.535 0.501 0.459  0.461   11.45
72)  chlorobenzene
                1.288 1.415 1.747 1.754 1.904 1.638 1.924 1.816 1.753  1.693   12.65
73)  1,1,1,2-tetrachloroethane
                0.377 0.433 0.555 0.555 0.679 0.628 0.742              0.567   22.89
           ---- Linear regression ----  Coefficient =  0.9933
             Response Ratio = -0.01018 + 0.70361 *A

74)  ethylbenzene
          2.335 2.222 2.280 2.903 2.840 3.208 2.736 3.225 3.051 2.880  2.768   13.43
75)  m,p-xylene
          0.813 0.817 0.832 1.097 1.103 1.215 1.042 1.230 1.168 1.116  1.043   15.68
76)  o-xylene
          0.808 0.718 0.815 1.049 1.078 1.247 1.082 1.273 1.197 1.158  1.042   18.83
77)  styrene
                          1.706 1.772 2.019 1.815 2.129 2.014 1.969  1.918    8.06
78)  bromoform
                0.174 0.189 0.219 0.253 0.319 0.334 0.439              0.275   34.33
           ---- Quadratic regression ----  Coefficient =  0.9988
             Response Ratio = -0.00229 + 0.25738 *A + 0.09044 *A^2

79)  trans-1,4-dichloro-2-butene
                          0.151 0.185 0.245 0.255 0.312 0.299 0.288  0.248   24.32
           ---- Linear regression ----  Coefficient =  0.9979
             Response Ratio = -0.01751 + 0.29622 *A


80) I   1,4-dichlorobenzene-d ----------------ISTD---------------------
81)  isopropylbenzene
                          3.305 3.357 3.639 3.104 3.615 3.450 3.145  3.374    6.22
82)  bromofluorobenzene (s)
          1.108 1.105 1.096 1.080 1.075 1.052 1.043 1.051 1.031 1.004  1.064    3.20
83)  bromobenzene
                          0.837 0.828 0.883 0.765 0.876 0.821 0.783  0.827    5.26
84)  1,1,2,2-tetrachloroethane
          0.597 0.540 0.621 0.633 0.627 0.668 0.618 0.710 0.665 0.643  0.632    7.21
85)  1,2,3-trichloropropane
                          0.681 0.608 0.609 0.546 0.633 0.590 0.556  0.603    7.61
86)  n-propylbenzene
                          3.726 3.762 4.002 3.423 4.041 3.856 3.573  3.769    5.89
87)  2-chlorotoluene
                          2.909 2.899 3.048 2.625 2.936 2.758 2.575  2.822    6.17
88)  4-chlorotoluene
                          2.773 2.647 2.808 2.401 2.834 2.685 2.463  2.659    6.37
89)  1,3,5-trimethylbenzene
                2.069 2.350 3.014 3.108 3.336 2.826 3.295 3.110 2.845  2.883   14.75
90)  tert-butylbenzene
                          2.331 2.333 2.514 2.133 2.457 2.350 2.091  2.316    6.72
91)  1,2,4-trimethylbenzene
                2.170 2.278 3.181 3.278 3.532 2.994 3.482 3.291 3.037  3.027   16.17
92)  sec-butylbenzene
```

Initial Calibration Summary

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSG5527-ICC5527
Lab FileID: G147550.D

```
                            3.489 3.587 3.995 3.328 3.987 3.848 3.544  3.683    7.09
 93)  1,3-dichlorobenzene
                 1.104 1.226 1.592 1.613 1.721 1.487 1.732 1.633 1.547  1.517   14.24
 94)  p-isopropyltoluene
                            3.095 3.280 3.610 3.059 3.657 3.498 3.211  3.344    7.30
 95)  1,4-dichlorobenzene
                 1.243 1.412 1.615 1.664 1.751 1.551 1.768 1.671 1.592  1.585   10.54
 96)  1,2-dichlorobenzene
                 1.160 1.327 1.581 1.621 1.723 1.512 1.734 1.640 1.551  1.539   12.17
 97)  n-butylbenzene
                            2.456 2.575 2.941 2.528 3.013 2.961 2.693  2.738    8.41
 98)  1,2-dibromo-3-chloropropane
                            0.116 0.120 0.145 0.151 0.197 0.195 0.193  0.160   22.27
              ---- Linear regression ----  Coefficient =  0.9968
                Response Ratio = -0.01256 + 0.19432 *A

 99)  1,3,5-trichlorobenzene
                            1.178 1.220 1.376 1.188 1.458 1.404 1.251  1.296    8.76
100)  1,2,4-trichlorobenzene
                            0.709 0.840 1.032 0.994 1.268 1.240 1.115  1.028   19.79
101)  hexachlorobutadiene
                            0.524 0.524 0.586 0.486 0.577 0.555 0.494  0.535    7.30
102)  naphthalene
                            1.370 1.694 2.238 2.355 3.044 3.034 2.949  2.383   28.17
              ---- Linear regression ----  Coefficient =  0.9973
                Response Ratio = -0.22284 + 3.00026 *A

103)  2-Methylnaphthalene
                                  0.248 0.394 0.536 0.897 1.045 1.102  0.704   51.03
              ---- Quadratic regression ----  Coefficient =  0.9942
                Response Ratio = -0.08755 + 0.89934 *A + 0.05993 *A^2

104)  1-Methylnaphthalene
                                  0.252 0.400 0.496 0.757 0.809 0.828  0.590   40.92
              ---- Linear regression ----  Coefficient =  0.9946
                Response Ratio = -0.07817 + 0.83474 *A

105)  1,2,3-trichlorobenzene
                            0.645 0.721 0.926 0.887 1.124 1.087 0.979  0.910   19.49
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           g151112w.m        Fri Nov 13 13:19:23 2015
```

Initial Calibration Verification

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSG5527-ICV5527
Lab FileID: G147556.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\G151112\G147556.D Vial: 15
Acq On : 12 Nov 2015 3:21 pm Operator: carab
Sample : icv5527-50 Inst : MSG
Misc : ms35592,MSG5527,,,,5,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\g151112w.m (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Fri Nov 13 13:02:58 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	97	0.00	3.15
2	p	tertiary butyl alcohol	1.245	1.332	-7.0	111	0.01	3.24
3	p	Ethanol	0.103	0.100	2.9	103	-0.02	2.52
4	I	pentafluorobenzene	1.000	1.000	0.0	105	0.00	5.10
5	p	dichlorodifluoromethane	1.017	0.967	4.9	97	-0.03	1.87
6	p	chloromethane	0.646	0.615	4.8	100	0.00	2.02
		----------	Amount	Calc.	%Drift	----------		
7	p	vinyl chloride	50.000	46.125	7.8	100	0.00	2.07
		----------	AvgRF	CCRF	%Dev	----------		
8	p	bromomethane	0.401	0.383	4.5	102	0.00	2.44
		----------	Amount	Calc.	%Drift	----------		
9	p	chloroethane	50.000	47.870	4.3	113	0.00	2.47
		----------	AvgRF	CCRF	%Dev	----------		
10	p	ethyl ether	0.379	0.381	-0.5	112	0.00	2.85
11	p	acetonitrile	0.183	0.143	21.9#	100	0.00	3.24
12	p	trichlorofluoromethane	0.846	0.826	2.4	97	0.00	2.70
13	p	freon-113	0.575	0.614	-6.8	131	0.03	3.12
14	p	acrolein	0.025	0.049#	-96.0#	210#	0.00	2.98
15	p	1,1-dichloroethene	0.454	0.493	-8.6	114	0.00	3.24
16	p	acetone	0.060	0.062#	-3.3	112	0.00	3.03
17	p	Methyl Acetate	0.376	0.396	-5.3	119	0.00	3.43
18	p	methylene chloride	0.485	0.501	-3.3	116	0.00	3.64
19	p	methyl tert butyl ether	1.250	1.327	-6.2	116	0.00	3.71
20	p	acrylonitrile	0.192	0.192	0.0	114	0.00	3.70
21	p	allyl chloride	0.573	0.695	-21.3#	141	0.00	3.52
		----------	Amount	Calc.	%Drift	----------		
22	p	trans-1,2-dichloroethene	50.000	45.541	8.9	107	0.00	3.92
		----------	AvgRF	CCRF	%Dev	----------		
23	p	iodomethane	0.860	0.900	-4.7	119	0.00	3.51
24	p	carbon disulfide	1.382	1.394	-0.9	116	0.00	3.69
25	p	propionitrile	0.068	0.067	1.5	107	0.00	4.77
26	p	vinyl acetate	0.733	0.716	2.3	109	0.00	4.13
27	p	chloroprene	0.873	0.836	4.2	113	-0.01	4.37
28	p	di-isopropyl ether	1.408	1.450	-3.0	116	0.00	4.14
29	p	methacrylonitrile	0.336	0.375	-11.6	129	0.00	4.96

Initial Calibration Verification

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSG5527-ICV5527
Lab FileID: G147556.D

30	p	2-butanone		0.049	0.049#	0.0	115	0.00	4.68
31	p	Ethyl Acetate		0.000	0.095	0.0	0#	0.02	4.99
32	p	Hexane		0.497	0.492	1.0	120	0.00	3.89
33	p	1,1-dichloroethane		0.890	0.897	-0.8	108	0.00	4.29
34	p	tert-butyl ethyl ether		1.517	1.455	4.1	107	0.00	4.55
35	p	isobutyl alcohol		0.000	0.019#	0.0	0#	-0.10	4.99
36	p	2,2-dichloropropane		0.588	0.577	1.9	112	0.00	4.85
37	p	cis-1,2-dichloroethene		0.501	0.540	-7.8	116	0.00	4.89
38	p	bromochloromethane		0.279	0.271	2.9	110	0.00	5.22
39	p	chloroform		0.947	0.933	1.5	107	0.00	5.04
40	S	dibromofluoromethane (s)		0.517	0.522	-1.0	104	0.00	5.27
41	p	Tetrahydrofuran		0.134	0.113	15.7	97	0.00	5.25
			Amount	Calc.		%Drift			
42	p	1,1,1-trichloroethane	50.000	46.371		7.3	111	-0.01	5.48
			AvgRF	CCRF		%Dev			
43	I	1,4-difluorobenzene		1.000	1.000	0.0	107	0.00	6.21
44	p	Cyclohexane		0.456	0.452	0.9	115	0.00	5.52
			Amount	Calc.		%Drift			
45	p	carbon tetrachloride	50.000	48.931		2.1	114	-0.02	5.76
			AvgRF	CCRF		%Dev			
46	p	1,1-dichloropropene		0.449	0.437	2.7	113	0.00	5.62
47	p	benzene		1.055	1.095	-3.8	114	0.00	5.92
48	p	1,2-dichloroethane		0.651	0.666	-2.3	109	0.00	5.90
49	p	tert-amyl methyl ether		0.736	0.730	0.8	110	0.00	5.74
50	p	heptane		0.770	0.794	-3.1	119	0.00	5.76
51	p	trichloroethene		0.332	0.349	-5.1	110	0.00	6.58
52	p	1,2-dichloropropane		0.300	0.304	-1.3	113	0.00	6.77
53	p	dibromomethane		0.222	0.223	-0.5	111	0.00	7.09
			Amount	Calc.		%Drift			
54	p	bromodichloromethane	50.000	43.591		12.8	105	0.00	7.03
			AvgRF	CCRF		%Dev			
55	p	Methylcyclohexane		0.462	0.463	-0.2	120	-0.01	6.66
			Amount	Calc.		%Drift			
56	p	2-chloroethyl vinyl ether	50.000	43.301		13.4	113	0.00	7.36
			AvgRF	CCRF		%Dev			
57	p	methyl methacrylate		0.190	0.187	1.6	109	0.00	6.83
			Amount	Calc.		%Drift			
58	p	1,4-dioxane	250.000	177.541		29.0#	93	-0.03	7.07
59	p	cis-1,3-dichloropropene	50.000	48.810		2.4	110	0.00	7.62
			AvgRF	CCRF		%Dev			
60	S	toluene-d8 (s)		1.154	1.152	0.2	105	0.00	7.88
61	p	4-methyl-2-pentanone		0.441	0.442	-0.2	110	0.00	7.39
62	p	toluene		0.759	0.752	0.9	113	0.00	7.97
			Amount	Calc.		%Drift			
63	p	trans-1,3-dichloropropene	50.000	46.211		7.6	101	0.00	8.17
			AvgRF	CCRF		%Dev			
64	p	1,1,2-trichloroethane		0.217	0.224	-3.2	110	0.00	8.34

Initial Calibration Verification

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSG5527-ICV5527
Lab FileID: G147556.D

65	p	ethyl methacrylate	0.346	0.344	0.6	108	0.00	8.15
66	I	chlorobenzene-d5	1.000	1.000	0.0	105	0.00	9.54
67	p	tetrachloroethene	0.612	0.644	-5.2	113	0.00	8.68
68	p	1,3-dichloropropane	0.883	0.903	-2.3	114	0.00	8.61
		----------	Amount	Calc.	%Drift	----------		
69	p	dibromochloromethane	50.000	47.544	4.9	108	0.00	8.91
		----------	AvgRF	CCRF	%Dev	----------		
70	p	1,2-dibromoethane	0.580	0.595	-2.6	111	0.00	9.13
71	p	2-hexanone	0.461	0.458	0.7	106	0.00	8.35
72	p	chlorobenzene	1.693	1.729	-2.1	111	0.00	9.58
		----------	Amount	Calc.	%Drift	----------		
73	p	1,1,1,2-tetrachloroethane	50.000	45.725	8.5	106	0.00	9.63
		----------	AvgRF	CCRF	%Dev	----------		
74	p	ethylbenzene	2.768	2.903	-4.9	112	0.00	9.63
75	p	m,p-xylene	1.043	1.091	-4.6	110	0.00	9.72
76	p	o-xylene	1.042	1.101	-5.7	107	0.00	10.20
77	p	styrene	1.918	1.862	2.9	108	0.00	10.23
		----------	Amount	Calc.	%Drift	----------		
78	p	bromoform	50.000	48.732	2.5	105	0.00	10.61
79	p	trans-1,4-dichloro-2-bute	50.000	46.492	7.0	106	0.00	10.64
		----------	AvgRF	CCRF	%Dev	----------		
80	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	105	0.00	12.16
81	p	isopropylbenzene	3.374	3.245	3.8	110	0.00	10.59
82	S	bromofluorobenzene (s)	1.064	1.041	2.2	105	0.00	10.86
83	p	bromobenzene	0.827	0.804	2.8	110	0.00	11.08
84	p	1,1,2,2-tetrachloroethane	0.632	0.669	-5.9	114	0.00	10.78
85	p	1,2,3-trichloropropane	0.603	0.553	8.3	106	0.00	10.94
86	p	n-propylbenzene	3.769	3.549	5.8	109	0.00	11.02
87	p	2-chlorotoluene	2.822	2.649	6.1	106	0.00	11.22
88	p	4-chlorotoluene	2.659	2.549	4.1	111	0.00	11.27
89	p	1,3,5-trimethylbenzene	2.883	3.081	-6.9	114	0.00	11.20
90	p	tert-butylbenzene	2.316	2.192	5.4	108	0.00	11.59
91	p	1,2,4-trimethylbenzene	3.027	3.083	-1.9	108	0.00	11.63
92	p	sec-butylbenzene	3.683	3.521	4.4	111	0.00	11.82
93	p	1,3-dichlorobenzene	1.517	1.539	-1.5	109	0.00	12.07
94	p	p-isopropyltoluene	3.344	3.286	1.7	113	0.00	11.97
95	p	1,4-dichlorobenzene	1.585	1.599	-0.9	108	0.00	12.19
96	p	1,2-dichlorobenzene	1.539	1.547	-0.5	107	0.00	12.60
97	p	n-butylbenzene	2.738	2.731	0.3	113	0.00	12.42
		----------	Amount	Calc.	%Drift	----------		
98	p	1,2-dibromo-3-chloropropa	50.000	42.320	15.4	106	0.00	13.45
		----------	AvgRF	CCRF	%Dev	----------		
99	p	1,3,5-trichlorobenzene	1.296	1.192	8.0	105	0.00	13.71
100	p	1,2,4-trichlorobenzene	1.028	1.039	-1.1	110	0.00	14.42
101	p	hexachlorobutadiene	0.535	0.516	3.6	111	0.00	14.57
		----------	Amount	Calc.	%Drift	----------		
102	p	naphthalene	50.000	40.993	18.0	100	0.00	14.70
103	p	2-Methylnaphthalene	25.000	19.089	23.6#	104	0.00	15.89
104	p	1-Methylnaphthalene	25.000	20.154	19.4	109	0.00	16.15

Initial Calibration Verification

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSG5527-ICV5527
Lab FileID: G147556.D

		AvgRF	CCRF	%Dev			
105 p	1,2,3-trichlorobenzene	0.910	0.918	-0.9	109	0.00	14.97

(#) = Out of Range SPCC's out = 4 CCC's out = 0
G147550.D g151112w.m Fri Nov 13 13:19:12 2015

Continuing Calibration Summary

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSG5557-CC5527
Lab FileID: G148284.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\G151204\g148284.D Vial: 1
Acq On : 4 Dec 2015 11:32 am Operator: carab
Sample : cc5527-50 Inst : MSG
Misc : ms35716,MSG5557,,,,5,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\g151112w.m (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Fri Nov 13 13:02:58 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	94	0.00	3.15
2	p	tertiary butyl alcohol	1.245	1.370	-10.0	110	0.00	3.23
3	p	Ethanol	0.103	0.092	10.7	92	-0.03	2.52
4	I	pentafluorobenzene	1.000	1.000	0.0	96	0.00	5.10
5	p	dichlorodifluoromethane	1.017	0.960	5.6	88	0.00	1.90
6	p	chloromethane	0.646	0.708	-9.6	106	0.03	2.05
		----------	Amount	Calc.	%Drift	----------		
7	p	vinyl chloride	50.000	47.792	4.4	95	0.02	2.10
		----------	AvgRF	CCRF	%Dev	----------		
8	p	bromomethane	0.401	0.394	1.7	96	0.02	2.47
		----------	Amount	Calc.	%Drift	----------		
9	p	chloroethane	50.000	47.152	5.7	101	0.05	2.53
		----------	AvgRF	CCRF	%Dev	----------		
10	p	ethyl ether	0.379	0.356	6.1	96	0.01	2.86
11	p	acetonitrile	0.183	0.128	30.1#	82	0.00	3.25
12	p	trichlorofluoromethane	0.846	0.607	28.3#	65	-0.04	2.66
13	p	freon-113	0.575	0.497	13.6	97	-0.04	3.05
14	p	acrolein	0.025	0.021#	16.0	83	0.02	3.00
15	p	1,1-dichloroethene	0.454	0.347	23.6#	73	0.04	3.28
16	p	acetone	0.060	0.066#	-10.0	109	0.00	3.03
17	p	Methyl Acetate	0.376	0.379	-0.8	104	0.01	3.43
18	p	methylene chloride	0.485	0.484	0.2	102	0.05	3.70
19	p	methyl tert butyl ether	1.250	1.174	6.1	94	0.00	3.72
20	p	acrylonitrile	0.192	0.186	3.1	101	0.02	3.71
21	p	allyl chloride	0.573	0.504	12.0	94	-0.02	3.49
		----------	Amount	Calc.	%Drift	----------		
22	p	trans-1,2-dichloroethene	50.000	40.793	18.4	87	-0.02	3.90
		----------	AvgRF	CCRF	%Dev	----------		
23	p	iodomethane	0.860	0.751	12.7	91	0.05	3.57
24	p	carbon disulfide	1.382	1.022	26.0#	78	0.06	3.74
25	p	propionitrile	0.068	0.067	1.5	98	0.00	4.76
26	p	vinyl acetate	0.733	0.704	4.0	98	0.00	4.14
27	p	chloroprene	0.873	0.795	8.9	98	-0.02	4.36
28	p	di-isopropyl ether	1.408	1.348	4.3	99	0.00	4.14
29	p	methacrylonitrile	0.336	0.321	4.5	101	0.00	4.96

Continuing Calibration Summary

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSG5557-CC5527
Lab FileID: G148284.D

30	p	2-butanone	0.049	0.058#	-18.4	124	0.00	4.68
31	p	Ethyl Acetate	0.000	0.035#	0.0	0#	0.00	4.98
32	p	Hexane	0.497	0.544	-9.5	122	0.00	3.90
33	p	1,1-dichloroethane	0.890	0.817	8.2	90	-0.02	4.28
34	p	tert-butyl ethyl ether	1.517	1.393	8.2	94	0.00	4.55
35	p	isobutyl alcohol	0.000	0.007#	0.0	0#	-0.12	4.98
36	p	2,2-dichloropropane	0.588	0.550	6.5	98	0.00	4.85
37	p	cis-1,2-dichloroethene	0.501	0.460	8.2	91	0.00	4.88
38	p	bromochloromethane	0.279	0.267	4.3	99	0.00	5.22
39	p	chloroform	0.947	0.919	3.0	96	0.00	5.04
40	S	dibromofluoromethane (s)	0.517	0.520	-0.6	95	0.00	5.27
41	p	Tetrahydrofuran	0.134	0.126	6.0	98	0.00	5.25
			Amount	Calc.	%Drift			
42	p	1,1,1-trichloroethane	50.000	46.221	7.6	101	0.01	5.50
			AvgRF	CCRF	%Dev			
43	I	1,4-difluorobenzene	1.000	1.000	0.0	90	0.00	6.21
44	p	Cyclohexane	0.456	0.361	20.8#	77	-0.04	5.48
			Amount	Calc.	%Drift			
45	p	carbon tetrachloride	50.000	48.640	2.7	96	-0.04	5.74
			AvgRF	CCRF	%Dev			
46	p	1,1-dichloropropene	0.449	0.438	2.4	96	0.00	5.62
47	p	benzene	1.055	1.071	-1.5	94	0.00	5.92
48	p	1,2-dichloroethane	0.651	0.692	-6.3	95	0.00	5.90
49	p	tert-amyl methyl ether	0.736	0.751	-2.0	95	0.00	5.74
50	p	heptane	0.770	0.799	-3.8	101	0.00	5.76
51	p	trichloroethene	0.332	0.356	-7.2	94	0.00	6.58
52	p	1,2-dichloropropane	0.300	0.294	2.0	92	0.00	6.77
53	p	dibromomethane	0.222	0.227	-2.3	95	0.00	7.09
			Amount	Calc.	%Drift			
54	p	bromodichloromethane	50.000	46.985	6.0	95	0.00	7.03
			AvgRF	CCRF	%Dev			
55	p	Methylcyclohexane	0.462	0.387	16.2	84	-0.03	6.64
			Amount	Calc.	%Drift			
56	p	2-chloroethyl vinyl ether	50.000	40.521	19.0	89	0.00	7.36
			AvgRF	CCRF	%Dev			
57	p	methyl methacrylate	0.190	0.185	2.6	91	0.00	6.83
			Amount	Calc.	%Drift			
58	p	1,4-dioxane	250.000	203.262	18.7	92	-0.03	7.07
59	p	cis-1,3-dichloropropene	50.000	49.609	0.8	94	0.00	7.62
			AvgRF	CCRF	%Dev			
60	S	toluene-d8 (s)	1.154	1.134	1.7	87	0.00	7.88
61	p	4-methyl-2-pentanone	0.441	0.451	-2.3	95	0.00	7.38
62	p	toluene	0.759	0.738	2.8	94	0.00	7.97
			Amount	Calc.	%Drift			
63	p	trans-1,3-dichloropropene	50.000	52.794	-5.6	99	0.00	8.17
			AvgRF	CCRF	%Dev			
64	p	1,1,2-trichloroethane	0.217	0.238	-9.7	99	0.00	8.34

Continuing Calibration Summary

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSG5557-CC5527
Lab FileID: G148284.D

65	p	ethyl methacrylate	0.346	0.341	1.4	91	0.00	8.15
66	I	chlorobenzene-d5	1.000	1.000	0.0	87	0.00	9.54
67	p	tetrachloroethene	0.612	0.677	-10.6	98	0.00	8.68
68	p	1,3-dichloropropane	0.883	0.918	-4.0	95	0.00	8.61
			Amount	Calc.	%Drift			
69	p	dibromochloromethane	50.000	54.644	-9.3	103	0.00	8.91
			AvgRF	CCRF	%Dev			
70	p	1,2-dibromoethane	0.580	0.617	-6.4	95	0.00	9.13
71	p	2-hexanone	0.461	0.535	-16.1	102	0.00	8.35
72	p	chlorobenzene	1.693	1.834	-8.3	97	0.00	9.58
			Amount	Calc.	%Drift			
73	p	1,1,1,2-tetrachloroethane	50.000	51.681	-3.4	99	0.00	9.63
			AvgRF	CCRF	%Dev			
74	p	ethylbenzene	2.768	3.023	-9.2	96	0.00	9.63
75	p	m,p-xylene	1.043	1.189	-14.0	99	0.00	9.72
76	p	o-xylene	1.042	1.177	-13.0	94	0.00	10.20
77	p	styrene	1.918	2.033	-6.0	97	0.00	10.23
			Amount	Calc.	%Drift			
78	p	bromoform	50.000	58.165	-16.3	109	0.00	10.61
79	p	trans-1,4-dichloro-2-bute	50.000	52.371	-4.7	100	0.00	10.64
			AvgRF	CCRF	%Dev			
80	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	93	0.00	12.16
81	p	isopropylbenzene	3.374	3.219	4.6	96	0.00	10.59
82	S	bromofluorobenzene (s)	1.064	1.008	5.3	90	0.00	10.86
83	p	bromobenzene	0.827	0.835	-1.0	101	0.00	11.08
84	p	1,1,2,2-tetrachloroethane	0.632	0.685	-8.4	103	0.00	10.78
85	p	1,2,3-trichloropropane	0.603	0.584	3.2	99	0.00	10.94
86	p	n-propylbenzene	3.769	3.734	0.9	101	0.00	11.02
87	p	2-chlorotoluene	2.822	2.787	1.2	98	0.00	11.22
88	p	4-chlorotoluene	2.659	2.558	3.8	99	0.00	11.27
89	p	1,3,5-trimethylbenzene	2.883	3.008	-4.3	99	0.00	11.20
90	p	tert-butylbenzene	2.316	2.227	3.8	97	0.00	11.59
91	p	1,2,4-trimethylbenzene	3.027	3.223	-6.5	100	0.00	11.63
92	p	sec-butylbenzene	3.683	3.613	1.9	101	0.00	11.82
93	p	1,3-dichlorobenzene	1.517	1.641	-8.2	102	0.00	12.07
94	p	p-isopropyltoluene	3.344	3.362	-0.5	102	0.00	11.97
95	p	1,4-dichlorobenzene	1.585	1.698	-7.1	101	0.00	12.19
96	p	1,2-dichlorobenzene	1.539	1.643	-6.8	101	0.00	12.60
97	p	n-butylbenzene	2.738	2.769	-1.1	101	0.00	12.42
			Amount	Calc.	%Drift			
98	p	1,2-dibromo-3-chloropropa	50.000	40.240	19.5	88	0.00	13.45
			AvgRF	CCRF	%Dev			
99	p	1,3,5-trichlorobenzene	1.296	1.213	6.4	95	0.00	13.71
100	p	1,2,4-trichlorobenzene	1.028	0.843	18.0	79	0.00	14.42
101	p	hexachlorobutadiene	0.535	0.474	11.4	90	0.00	14.57
			Amount	Calc.	%Drift			
102	p	naphthalene	50.000	33.551	32.9#	70	0.00	14.70
103	p	2-Methylnaphthalene	25.000	8.068	67.7#	20	0.00	15.88
104	p	1-Methylnaphthalene	25.000	7.692	69.2#	19	0.00	16.15

Continuing Calibration Summary

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSG5557-CC5527
Lab FileID: G148284.D

		AvgRF	CCRF	%Dev			
105 p	1,2,3-trichlorobenzene	0.910	0.688	24.4#	72	0.00	14.97

(#) = Out of Range SPCC's out = 5 CCC's out = 0
G147550.D g151112w.m Mon Dec 07 08:26:06 2015

Initial Calibration Summary

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSH2557-ICC2557
Lab FileID: H76829.D

Response Factor Report MSH

Method : H:\1\METHODS\H151123W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Nov 24 15:20:34 2015
Response via : Initial Calibration

Calibration Files
0.5 =H76823.D 1 =H76824.D 2 =H76825.D 5 =H76826.D
10 =H76827.D 20 =H76828.D 50 =H76829.D 100 =H76830.D
200 =H76831.D 400 =H76832.D = =

Compound	0.5	1	2	5	10	20	50	100	200	400	Avg	%RSD
1) I Tert Butyl Alcohol-d9 ----------ISTD----------												
2) tertiary butyl alcohol	1.268	0.919	0.955	1.116	1.210	1.296	1.189	1.154			1.138	12.06
3) Ethanol	0.161	0.102	0.102	0.118	0.119	0.131	0.121	0.115			0.121	15.42
4) I pentafluorobenzene ----------ISTD----------												
5) dichlorodifluoromethane	0.345	0.438	0.396	0.448	0.397	0.433	0.378	0.370			0.400	9.11
6) chloromethane	0.409	0.423	0.369	0.416	0.355	0.384	0.315	0.282			0.369	13.62
7) vinyl chloride	0.284	0.374	0.475	0.443	0.507	0.444	0.479	0.408			0.427	16.74
8) bromomethane	0.247	0.299	0.269	0.314	0.288	0.328	0.296	0.293			0.292	8.61
9) chloroethane	0.237	0.296	0.259	0.298	0.270	0.298	0.273	0.264			0.274	8.02
10) acetonitrile			0.038	0.041	0.046	0.050	0.045	0.046			0.044#	9.71
11) trichlorofluoromethane	0.287	0.373	0.541	0.507	0.608	0.577	0.657	0.604	0.618		0.530	23.26
---- Linear regression ---- Coefficient = 0.9989												
Response Ratio = -0.00841 + 0.61832 *A												
12) freon-113	0.334	0.345	0.408	0.452	0.487	0.438	0.429				0.414	13.51
13) acrolein	0.015	0.012	0.013	0.012	0.014	0.012	0.012				0.013#	9.35
14) 1,1-dichloroethene	0.340	0.433	0.312	0.320	0.394	0.431	0.464	0.420	0.409		0.392	13.92
15) acetone	0.060	0.053	0.051	0.054	0.057	0.051	0.050				0.054#	6.79
16) ethyl ether	0.308	0.323	0.387	0.440	0.460	0.422	0.406				0.392	14.65
17) methyl acetate	0.397	0.383	0.454	0.481	0.505	0.468	0.443				0.447	9.87
18) methylene chloride	0.594	0.406	0.421	0.476	0.513	0.546	0.492	0.477			0.491	12.59
19) methyl tert butyl ether	1.273	1.325	0.951	0.983	1.177	1.350	1.442	1.319	1.278		1.233	13.49
20) acrylonitrile	0.132	0.152	0.181	0.215	0.232	0.208	0.197				0.188	18.89
21) allyl chloride	0.577	0.577	0.653	0.721	0.764	0.670	0.603				0.652	11.10

Initial Calibration Summary

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSH2557-ICC2557
Lab FileID: H76829.D

```
22)  trans-1,2-dichloroethene
                0.474 0.481 0.355 0.361 0.429 0.468 0.505 0.459 0.445  0.442   11.84
23)  iodomethane
                          0.580 0.593 0.713 0.783 0.843 0.771 0.753  0.719   13.76
24)  carbon disulfide
                          1.106 1.144 1.369 1.513 1.634 1.485 1.432  1.383   14.05
25)  propionitrile
                          0.036 0.043 0.062 0.075 0.080 0.075 0.072  0.063   26.95
           ---- Linear regression ----  Coefficient =  0.9974
             Response Ratio = -0.00417 + 0.07495 *A

26)  vinyl acetate
                          0.408 0.449 0.548 0.605 0.597 0.625 0.600  0.547   15.58
27)  chloroprene
                          0.518 0.552 0.678 0.758 0.819 0.744 0.689  0.680   16.11
28)  di-isopropyl ether
                     1.632 1.191 1.248 1.495 1.655 1.716 1.524 1.351  1.477   13.20
29)  methacrylonitrile
                          0.239 0.257 0.305 0.333 0.344 0.310 0.293  0.297   12.79
30)  2-butanone
                          0.047 0.054 0.061 0.062 0.067 0.060 0.058  0.058#  11.12
31)  1,1-dichloroethane
                0.876 0.966 0.693 0.703 0.834 0.905 0.968 0.876 0.830  0.850   11.64
32)  tert-butyl ethyl ether
                     1.534 1.129 1.183 1.445 1.629 1.746 1.582 1.471  1.465   14.52
33)  Hexane
                          0.598 0.591 0.697 0.765 0.797 0.681 0.614  0.678   12.09
34)  isobutyl alcohol
                                                                     0.000#  -1.00
35)  2,2-dichloropropane
                          0.428 0.438 0.527 0.578 0.625 0.565 0.544  0.529   13.73
36)  cis-1,2-dichloroethene
                0.511 0.539 0.396 0.398 0.474 0.524 0.559 0.504 0.492  0.489   11.77
37)  ethyl acetate
                                                                     0.000#  -1.00
38)  bromochloromethane
                          0.192 0.200 0.234 0.260 0.276 0.254 0.247  0.238   13.18
39)  chloroform
                0.902 0.944 0.696 0.710 0.835 0.915 0.972 0.883 0.839  0.855   11.35
40)  dibromofluoromethane (s)
           0.478 0.467 0.477 0.475 0.471 0.475 0.475 0.477 0.464 0.462  0.472    1.24
41)  1,1,1-trichloroethane
                0.618 0.754 0.542 0.557 0.680 0.751 0.807 0.737 0.712  0.684   13.56

42) I   1,4-difluorobenzene   ----------------ISTD---------------------
43)  cyclohexane
                          0.438 0.424 0.542 0.607 0.650 0.592 0.569  0.546   15.62
44)  carbon tetrachloride
                0.235 0.310 0.237 0.266 0.338 0.396 0.444              0.318   25.16
           ---- Quadratic regression ----  Coefficient =  0.9977
             Response Ratio = -0.00216 + 0.30956 *A + 0.06989 *A^2

45)  1,1-dichloropropene
                          0.327 0.336 0.394 0.446 0.477 0.450 0.437  0.410   14.40
46)  benzene
           1.512 1.319 1.409 1.007 1.019 1.201 1.338 1.409 1.304 1.231  1.275   12.92
47)  tetrahydrofuran
                          0.077 0.080 0.096 0.111 0.113 0.106 0.100  0.098   14.69
48)  1,2-dichloroethane
                0.511 0.499 0.366 0.378 0.437 0.489 0.501 0.468 0.444  0.455   11.71
```

Initial Calibration Summary

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSH2557-ICC2557
Lab FileID: H76829.D

```
49)  tert-amyl methyl ether
                      0.886 0.650 0.668 0.856 0.958 1.004 0.951 0.913  0.861   15.43
50)  heptane
                            0.288 0.289 0.343 0.399 0.420 0.378 0.360  0.354   14.50
51)  trichloroethene
           0.410 0.338 0.387 0.274 0.282 0.331 0.372 0.397 0.371 0.353  0.351   13.09
52)  1,2-dichloropropane
                      0.348 0.265 0.272 0.319 0.358 0.377 0.353 0.336  0.329   12.40
53)  dibromomethane
                      0.234 0.171 0.178 0.208 0.236 0.248 0.230 0.223  0.216   13.01
54)  bromodichloromethane
                  0.422 0.423 0.318 0.332 0.402 0.464 0.492 0.466 0.452  0.419   14.34
55)  methylcyclohexane
                            0.372 0.388 0.475 0.544 0.593 0.540 0.533  0.492   17.11
56)  2-chloroethyl vinyl ether
                            0.173 0.167 0.209 0.206 0.224 0.218 0.217  0.202   11.33
57)  methyl methacrylate
                            0.150 0.166 0.200 0.244 0.253 0.245 0.243  0.215   19.78
58)  1,4-dioxane
                                        0.006 0.004 0.004 0.003 0.003  0.004#  23.92
             ---- Linear regression ----  Coefficient =  0.9985
               Response Ratio = 0.00570 + 0.00313 *A

59)  cis-1,3-dichloropropene
           0.485 0.466 0.471 0.350 0.379 0.449 0.521 0.565 0.535 0.516  0.474   14.26
60)  toluene-d8 (s)
           1.149 1.134 1.138 1.128 1.130 1.134 1.155 1.149 1.148 1.151  1.141    0.86
61)  4-methyl-2-pentanone
                            0.225 0.245 0.295 0.347 0.350 0.329 0.324  0.302   16.40
62)  toluene
           0.933 0.768 0.821 0.589 0.611 0.713 0.818 0.867 0.823 0.781  0.772   13.98
63)  trans-1,3-dichloropropene
           0.435 0.433 0.435 0.312 0.338 0.405 0.493 0.522 0.498 0.493  0.436   16.01
64)  1,1,2-trichloroethane
                  0.271 0.273 0.201 0.205 0.241 0.278 0.287 0.272 0.266  0.255   12.57
65)  ethyl methacrylate
                            0.256 0.282 0.349 0.444 0.450 0.441 0.434  0.379   21.96
             ---- Linear regression ----  Coefficient =  0.9990
               Response Ratio = -0.02323 + 0.44362 *A


66) I   chlorobenzene-d5      ----------------ISTD--------------------
67)  tetrachloroethene
           0.798 0.640 0.738 0.552 0.550 0.649 0.697 0.792 0.767 0.767  0.695   13.48
68)  1,3-dichloropropane
                            0.755 0.783 0.893 0.973 1.058 0.993 0.966  0.917   12.27
69)  dibromochloromethane
           0.535 0.557 0.563 0.407 0.446 0.524 0.599 0.701 0.683 0.688  0.570   17.57
70)  1,2-dibromoethane
                      0.623 0.455 0.488 0.555 0.616 0.685 0.653 0.655  0.591   14.11
71)  2-hexanone
                            0.285 0.316 0.354 0.403 0.439 0.413 0.419  0.376   15.49
72)  chlorobenzene
                  1.866 1.882 1.332 1.395 1.590 1.727 1.912 1.828 1.796  1.703   12.67
73)  1,1,1,2-tetrachloroethane
                      0.565 0.428 0.452 0.525 0.581 0.664 0.638 0.643  0.562   15.74
74)  ethylbenzene
           3.088 2.632 2.921 2.051 2.218 2.624 2.936 3.228 3.084 2.950  2.773   13.99
75)  m,p-xylene
           1.178 1.032 1.115 0.813 0.873 1.030 1.158 1.280 1.223 1.122  1.082   13.70
```

Initial Calibration Summary

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSH2557-ICC2557
Lab FileID: H76829.D

```
76)  o-xylene
          1.195 1.133 1.114 0.846 0.931 1.081 1.163 1.311 1.238 1.175  1.119   12.41
77)  styrene
                            1.230 1.389 1.646 1.884 2.134 2.019 1.970  1.753   19.45
78)  bromoform
                 0.344 0.334 0.257 0.280 0.333 0.396 0.486              0.347   21.90
              ---- Quadratic regression ----  Coefficient =  0.9992
                Response Ratio = 0.00068 + 0.28289 *A + 0.10252 *A^2

79)  trans-1,4-dichloro-2-butene
                            0.133 0.154 0.184 0.205 0.248 0.233 0.218  0.196   21.31
              ---- Linear regression ----  Coefficient =  0.9964
                Response Ratio = -0.01132 + 0.22776 *A


80) I   1,4-dichlorobenzene-d ----------------ISTD---------------------
81)  isopropylbenzene
                            2.118 2.262 2.725 3.066 3.245 3.142 3.025  2.797   15.97
82)  bromofluorobenzene (s)
          0.955 0.956 0.967 0.949 0.953 0.954 0.936 0.921 0.923 0.948  0.946    1.56
83)  bromobenzene
                            0.658 0.681 0.782 0.879 0.930 0.910 0.923  0.823   14.12
84)  1,1,2,2-tetrachloroethane
          0.814 0.803 0.804 0.566 0.624 0.715 0.781 0.805 0.772 0.724  0.741   11.49
85)  1,2,3-trichloropropane
                            0.654 0.712 0.836 0.940 1.007 0.963 0.934  0.864   15.61
86)  n-propylbenzene
                            2.570 2.757 3.326 3.733 3.889 3.745 3.592  3.373   15.36
87)  2-chlorotoluene
                            1.627 1.700 2.025 2.207 2.328 2.214 2.146  2.035   13.28
88)  4-chlorotoluene
                            1.706 1.804 2.157 2.363 2.478 2.389 2.294  2.170   13.89
89)  1,3,5-trimethylbenzene
                 2.289 2.500 1.790 1.955 2.387 2.662 2.797 2.682 2.559  2.402   14.14
90)  tert-butylbenzene
                            1.065 1.139 1.374 1.548 1.609 1.517 1.470  1.389   15.11
91)  1,2,4-trimethylbenzene
                 2.431 2.526 1.876 2.053 2.473 2.768 2.905 2.768 2.636  2.493   13.61
92)  sec-butylbenzene
                            2.284 2.473 2.996 3.349 3.539 3.266 3.120  3.004   15.42
93)  1,3-dichlorobenzene
                 1.640 1.648 1.173 1.241 1.410 1.573 1.669 1.593 1.566  1.501   12.26
94)  p-isopropyltoluene
                            1.961 2.139 2.565 2.907 3.114 2.868 2.599  2.593   16.16
95)  1,4-dichlorobenzene
                 1.722 1.688 1.224 1.276 1.486 1.649 1.754 1.651 1.482  1.548   12.52
96)  1,2-dichlorobenzene
                 1.587 1.547 1.103 1.147 1.345 1.487 1.578 1.470 1.401  1.407   12.70
97)  n-butylbenzene
                            1.795 1.912 2.349 2.658 2.850 2.618 2.447  2.376   16.49
98)  1,2-dibromo-3-chloropropane
                            0.065 0.074 0.087 0.094 0.103 0.090 0.067  0.083   17.38
99)  1,3,5-trichlorobenzene
                            0.879 0.906 1.069 1.195 1.263 1.135 1.008  1.065   13.51
100)  1,2,4-trichlorobenzene
                            0.481 0.507 0.618 0.686 0.689 0.551        0.588   15.23
101)  hexachlorobutadiene
                            0.349 0.360 0.430 0.480 0.494 0.429 0.374  0.417   13.83
102)  naphthalene
                            0.473 0.507 0.640 0.719 0.689 0.490        0.586   18.59
```

Initial Calibration Summary

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSH2557-ICC2557
Lab FileID: H76829.D

```
103)  1,2,3-trichlorobenzene
                            0.172 0.183 0.225 0.237 0.215 0.141        0.196   18.63
104)  2-Methylnaphthalene
                                                                       0.000#  -1.00
105)  1-Methylnaphthalene
                                                                       0.000#  -1.00
 ----------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          H151123W.M        Tue Nov 24 15:22:33 2015
```

Initial Calibration Verification

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSH2557-ICV2557
Lab FileID: H76835.D

Evaluate Continuing Calibration Report

Data File : H:\1\DATA\H151123\H76835.D Vial: 29
Acq On : 24 Nov 2015 1:17 am Operator: kaylap
Sample : icv2557-50 Inst : MSH
Misc : ms35670,msh2557,,,,5,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : H:\1\METHODS\H151123W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Nov 24 15:20:34 2015
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	500.000	500.000	0.0	102	0.00	6.19
2	p	tertiary butyl alcohol	500.000	531.324	-6.3	102	0.00	6.27
3	p	Ethanol	5000.000	3863.783	22.7	80	0.00	5.10
4	I	pentafluorobenzene	50.000	50.000	0.0	112	0.00	8.60
5	p	dichlorodifluoromethane	50.000	67.498	-35.0#	153	0.00	4.02
6	P	chloromethane	50.000	58.558	-17.1	137	0.00	4.28
7	p	vinyl chloride	50.000	64.799	-29.6	140	0.00	4.49
8	p	bromomethane	50.000	60.692	-21.4	138	0.00	4.97
9	p	chloroethane	50.000	63.688	-27.4	145	0.00	5.11
10	p	acetonitrile	50.000	46.977	6.0	101	0.00	5.63
11	p	trichlorofluoromethane	50.000	54.418	-8.8	129	0.00	5.74
12	p	freon-113	50.000	53.520	-7.0	110	0.00	6.49
13	p	acrolein	250.000	1040.746	-316.3#	497	0.00	5.69
14	p	1,1-dichloroethene	50.000	53.965	-7.9	110	0.00	6.31
15	p	acetone	50.000	53.931	-7.9	121	0.00	5.82
16	p	ethyl ether	50.000	53.830	-7.7	108	0.00	5.93
17	p	methyl acetate	50.000	55.109	-10.2	115	0.00	6.43
18	p	methylene chloride	50.000	52.048	-4.1	112	0.00	6.45
19	p	methyl tert butyl ether	50.000	56.896	-13.8	117	0.00	7.19
20	p	acrylonitrile	50.000	55.040	-10.1	108	0.00	6.32
21	p	allyl chloride	50.000	56.142	-12.3	114	0.00	6.52
22	p	trans-1,2-dichloroethene	50.000	48.916	2.2	104	0.00	7.11
23	p	iodomethane	50.000	55.454	-10.9	114	0.00	6.36
24	p	carbon disulfide	50.000	49.250	1.5	101	0.00	6.72
25	p	propionitrile	50.000	51.707	-3.4	110	0.00	7.35
26	p	vinyl acetate	50.000	58.509	-17.0	119	0.00	7.44
27	p	chloroprene	50.000	53.289	-6.6	107	0.00	7.71
28	p	di-isopropyl ether	50.000	55.316	-10.6	111	0.00	7.76
29	p	methacrylonitrile	50.000	52.801	-5.6	106	0.00	7.86
30	p	2-butanone	50.000	52.646	-5.3	112	0.00	7.75
31	P	1,1-dichloroethane	50.000	51.091	-2.2	108	0.00	7.35
32	p	tert-butyl ethyl ether	50.000	53.665	-7.3	108	0.00	8.15
33	p	Hexane	50.000	50.054	-0.1	99	0.00	7.73
34	p	isobutyl alcohol		----------NA----------				
35	p	2,2-dichloropropane	50.000	51.700	-3.4	106	0.00	8.21
36	p	cis-1,2-dichloroethene	50.000	56.164	-12.3	117	0.00	7.92
37	p	ethyl acetate		----------NA----------				
38	p	bromochloromethane	50.000	52.795	-5.6	108	0.00	8.08
39	p	chloroform	50.000	51.313	-2.6	108	0.00	8.12
40	S	dibromofluoromethane (s)	50.000	49.180	1.6	110	0.00	8.24
41	p	1,1,1-trichloroethane	50.000	53.925	-7.8	110	0.00	8.88

Initial Calibration Verification

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSH2557-ICV2557
Lab FileID: H76835.D

			Amount	Calc.	%Drift			
42	I	1,4-difluorobenzene	50.000	50.000	0.0	110	0.00	9.47
43	p	cyclohexane	50.000	48.161	3.7	95	0.00	9.17
			Amount	Calc.	%Drift			
44	p	carbon tetrachloride	50.000	52.246	-4.5	110	0.00	9.24
			Amount	Calc.	%Drift			
45	p	1,1-dichloropropene	50.000	53.364	-6.7	108	0.00	9.04
46	p	benzene	50.000	52.081	-4.2	109	0.00	9.26
47	p	tetrahydrofuran	50.000	53.239	-6.5	103	0.00	8.45
48	p	1,2-dichloroethane	50.000	52.246	-4.5	107	0.00	8.77
49	p	tert-amyl methyl ether	50.000	56.497	-13.0	112	0.00	9.39
50	p	heptane	50.000	52.315	-4.6	102	0.00	9.75
51	p	trichloroethene	50.000	52.449	-4.9	109	0.00	9.89
52	p	1,2-dichloropropane	50.000	54.883	-9.8	111	0.00	9.85
53	p	dibromomethane	50.000	52.840	-5.7	106	0.00	9.83
54	p	bromodichloromethane	50.000	52.352	-4.7	104	0.00	9.95
55	p	methylcyclohexane	50.000	51.207	-2.4	102	0.00	10.41
56	p	2-chloroethyl vinyl ether	50.000	60.083	-20.2	129	0.00	10.32
57	p	methyl methacrylate	50.000	56.271	-12.5	109	0.00	10.04
58	p	1,4-dioxane	250.000	207.946	16.8	92	0.00	10.04
59	p	cis-1,3-dichloropropene	50.000	53.939	-7.9	108	0.00	10.56
60	S	toluene-d8 (s)	50.000	50.151	-0.3	109	0.00	11.27
61	p	4-methyl-2-pentanone	50.000	58.711	-17.4	112	0.00	10.65
62	p	toluene	50.000	52.548	-5.1	109	0.00	11.34
63	p	trans-1,3-dichloropropene	50.000	51.756	-3.5	101	0.00	10.99
64	p	1,1,2-trichloroethane	50.000	53.528	-7.1	108	0.00	11.16
65	p	ethyl methacrylate	50.000	55.207	-10.4	115	0.00	11.37
66	I	chlorobenzene-d5	50.000	50.000	0.0	106	0.00	12.73
67	p	tetrachloroethene	50.000	49.756	0.5	105	0.00	12.08
68	p	1,3-dichloropropane	50.000	55.712	-11.4	112	0.00	11.39
69	p	dibromochloromethane	50.000	52.941	-5.9	107	0.00	11.68
70	p	1,2-dibromoethane	50.000	52.682	-5.4	107	0.00	11.93
71	p	2-hexanone	50.000	57.365	-14.7	113	0.00	11.51
72	P	chlorobenzene	50.000	50.599	-1.2	106	0.00	12.76
73	p	1,1,1,2-tetrachloroethane	50.000	53.657	-7.3	110	0.00	12.68
74	p	ethylbenzene	50.000	52.973	-5.9	106	0.00	12.94
75	p	m,p-xylene	100.000	106.610	-6.6	106	0.00	13.12
76	p	o-xylene	50.000	51.436	-2.9	105	0.00	13.54
77	p	styrene	50.000	53.442	-6.9	106	0.00	13.47
			Amount	Calc.	%Drift			
78	P	bromoform	50.000	51.818	-3.6	108	0.00	13.29
79	p	trans-1,4-dichloro-2-bute	50.000	45.383	9.2	101	0.00	13.69
			Amount	Calc.	%Drift			
80	I	1,4-dichlorobenzene-d4	50.000	50.000	0.0	108	0.00	15.29
81	p	isopropylbenzene	50.000	53.741	-7.5	106	0.00	13.90
82	S	bromofluorobenzene (s)	50.000	50.073	-0.1	109	0.00	13.96
83	p	bromobenzene	50.000	54.268	-8.5	110	0.00	14.18
84	P	1,1,2,2-tetrachloroethane	50.000	54.091	-8.2	111	0.00	13.54
85	p	1,2,3-trichloropropane	50.000	53.241	-6.5	106	0.00	13.69
86	p	n-propylbenzene	50.000	52.169	-4.3	102	0.00	14.35
87	p	2-chlorotoluene	50.000	53.055	-6.1	106	0.00	14.47
88	p	4-chlorotoluene	50.000	52.788	-5.6	105	0.00	14.54
89	p	1,3,5-trimethylbenzene	50.000	55.546	-11.1	108	0.00	14.63
90	p	tert-butylbenzene	50.000	53.539	-7.1	104	0.00	14.93

Initial Calibration Verification

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSH2557-ICV2557
Lab FileID: H76835.D

91	p	1,2,4-trimethylbenzene	50.000	53.047	-6.1	103	0.00	15.04
92	p	sec-butylbenzene	50.000	52.652	-5.3	102	0.00	15.16
93	p	1,3-dichlorobenzene	50.000	50.793	-1.6	105	0.00	15.26
94	p	p-isopropyltoluene	50.000	53.528	-7.1	103	0.00	15.33
95	p	1,4-dichlorobenzene	50.000	51.694	-3.4	105	0.00	15.32
96	p	1,2-dichlorobenzene	50.000	51.652	-3.3	106	0.00	15.69
97	p	n-butylbenzene	50.000	52.482	-5.0	101	0.00	15.75
98	p	1,2-dibromo-3-chloropropa	50.000	57.878	-15.8	110	0.00	16.17
99	p	1,3,5-trichlorobenzene	50.000	48.930	2.1	94	0.00	16.99
100	p	1,2,4-trichlorobenzene	50.000	56.639	-13.3	105	0.00	17.54
101	p	hexachlorobutadiene	50.000	57.343	-14.7	108	0.00	17.85
102	p	naphthalene	50.000	59.981	-20.0	106	0.00	17.82
103	p	1,2,3-trichlorobenzene	50.000	63.108	-26.2	113	0.00	18.03
104	p	2-Methylnaphthalene		----------NA----------				
105	p	1-Methylnaphthalene		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
H76829.D H151123W.M Tue Nov 24 15:22:02 2015

Continuing Calibration Summary

Job Number: MC43041
Account: GEI GEI Consultants, Inc.
Project: GEI Tufts Street Somerville MA

Sample: MSH2567-CC2557
Lab FileID: H77078.D

Evaluate Continuing Calibration Report

Data File : H:\1\DATA\H151203\H77078.D Vial: 3
Acq On : 3 Dec 2015 12:23 pm Operator: kaylap
Sample : cc2557-50 Inst : MSH
Misc : ms35741,msh2567,,,,5,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : H:\1\METHODS\H151123W.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Tue Nov 24 15:20:34 2015
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	94	0.00	6.18
2	p	tertiary butyl alcohol	1.138	1.111	2.4	86	0.00	6.26
3	p	Ethanol	0.121	0.112	7.4	89	0.00	5.09
4	I	pentafluorobenzene	1.000	1.000	0.0	95	0.00	8.60
5	p	dichlorodifluoromethane	0.400	0.372	7.0	89	0.00	4.02
6	P	chloromethane	0.369	0.389	-5.4	104	0.00	4.28
7	p	vinyl chloride	0.427	0.473	-10.8	101	0.00	4.49
8	p	bromomethane	0.292	0.300	-2.7	99	0.00	4.98
9	p	chloroethane	0.274	0.304	-10.9	107	0.00	5.12
10	p	acetonitrile	0.044	0.036#	18.2	73	0.01	5.64
		----------	Amount	Calc.	%Drift		----------	
11	p	trichlorofluoromethane	50.000	51.216	-2.4	103	0.00	5.74
		----------	AvgRF	CCRF	%Dev		----------	
12	p	freon-113	0.414	0.424	-2.4	89	0.00	6.49
13	p	acrolein	0.013	0.046#	-253.8#	362#	0.00	5.68
14	p	1,1-dichloroethene	0.392	0.382	2.6	84	0.00	6.31
15	p	acetone	0.054	0.072#	-33.3#	126	0.00	5.82
16	p	ethyl ether	0.392	0.383	2.3	83	0.00	5.93
17	p	methyl acetate	0.447	0.455	-1.8	90	0.00	6.43
18	p	methylene chloride	0.491	0.472	3.9	87	0.00	6.45
19	p	methyl tert butyl ether	1.233	1.277	-3.6	90	0.00	7.20
20	p	acrylonitrile	0.188	0.183	2.7	81	0.00	6.31
21	p	allyl chloride	0.652	0.730	-12.0	96	0.00	6.52
22	p	trans-1,2-dichloroethene	0.442	0.393	11.1	80	0.00	7.12
23	p	iodomethane	0.719	0.718	0.1	87	0.00	6.36
24	p	carbon disulfide	1.383	1.266	8.5	79	0.00	6.72
		----------	Amount	Calc.	%Drift		----------	
25	p	propionitrile	50.000	46.685	6.6	83	0.00	7.34
		----------	AvgRF	CCRF	%Dev		----------	
26	p	vinyl acetate	0.547	0.914	-67.1#	143	0.00	7.44
27	p	chloroprene	0.680	0.669	1.6	84	0.00	7.71
28	p	di-isopropyl ether	1.477	1.525	-3.2	87	0.00	7.76
29	p	methacrylonitrile	0.297	0.279	6.1	80	0.00	7.86
30	p	2-butanone	0.058	0.066#	-13.8	101	0.00	7.75
31	P	1,1-dichloroethane	0.850	0.796	6.4	83	0.00	7.35
32	p	tert-butyl ethyl ether	1.465	1.456	0.6	85	0.00	8.16
33	p	Hexane	0.678	0.703	-3.7	87	0.00	7.73

Continuing Calibration Summary

Job Number: MC43041 **Sample:** MSH2567-CC2557
Account: GEI GEI Consultants, Inc. **Lab FileID:** H77078.D
Project: GEI Tufts Street Somerville MA

34	p	isobutyl alcohol	0.000	0.048#	0.0	0#	0.00	8.16
35	p	2,2-dichloropropane	0.529	0.609	-15.1	100	0.00	8.22
36	p	cis-1,2-dichloroethene	0.489	0.497	-1.6	90	0.00	7.92
37	p	ethyl acetate	0.000	0.245	0.0	0#	0.00	8.16
38	p	bromochloromethane	0.238	0.227	4.6	83	0.00	8.08
39	p	chloroform	0.855	0.811	5.1	84	0.00	8.12
40	S	dibromofluoromethane (s)	0.472	0.473	-0.2	94	0.00	8.24
41	p	1,1,1-trichloroethane	0.684	0.688	-0.6	87	0.00	8.88
42	I	1,4-difluorobenzene	1.000	1.000	0.0	93	0.00	9.47
43	p	cyclohexane	0.546	0.503	7.9	77	0.00	9.17
			Amount	Calc.	%Drift			
44	p	carbon tetrachloride	50.000	51.779	-3.6	92	0.00	9.24
			AvgRF	CCRF	%Dev			
45	p	1,1-dichloropropene	0.410	0.405	1.2	84	0.00	9.05
46	p	benzene	1.275	1.208	5.3	84	0.00	9.27
47	p	tetrahydrofuran	0.098	0.092	6.1	77	0.00	8.44
48	p	1,2-dichloroethane	0.455	0.438	3.7	83	0.00	8.77
49	p	tert-amyl methyl ether	0.861	0.870	-1.0	84	0.00	9.40
50	p	heptane	0.354	0.417	-17.8	97	0.00	9.76
51	p	trichloroethene	0.351	0.323	8.0	81	0.00	9.89
52	p	1,2-dichloropropane	0.329	0.322	2.1	83	0.00	9.85
53	p	dibromomethane	0.216	0.203	6.0	80	0.00	9.83
54	p	bromodichloromethane	0.419	0.407	2.9	81	0.00	9.95
55	p	methylcyclohexane	0.492	0.495	-0.6	84	0.00	10.41
56	p	2-chloroethyl vinyl ether	0.202	0.204	-1.0	92	0.00	10.32
57	p	methyl methacrylate	0.215	0.204	5.1	78	0.00	10.04
			Amount	Calc.	%Drift			
58	p	1,4-dioxane	250.000	177.244	29.1#	69	0.00	10.04
			AvgRF	CCRF	%Dev			
59	p	cis-1,3-dichloropropene	0.474	0.461	2.7	82	0.00	10.56
60	S	toluene-d8 (s)	1.141	1.149	-0.7	92	0.00	11.27
61	p	4-methyl-2-pentanone	0.302	0.309	-2.3	83	0.00	10.66
62	p	toluene	0.772	0.736	4.7	84	0.00	11.34
63	p	trans-1,3-dichloropropene	0.436	0.402	7.8	76	0.00	10.99
64	p	1,1,2-trichloroethane	0.255	0.237	7.1	79	0.00	11.16
			Amount	Calc.	%Drift			
65	p	ethyl methacrylate	50.000	45.733	8.5	80	0.00	11.37
			AvgRF	CCRF	%Dev			
66	I	chlorobenzene-d5	1.000	1.000	0.0	91	0.00	12.73
67	p	tetrachloroethene	0.695	0.625	10.1	82	0.00	12.08
68	p	1,3-dichloropropane	0.917	0.872	4.9	82	0.00	11.39
69	p	dibromochloromethane	0.570	0.550	3.5	84	0.00	11.68
70	p	1,2-dibromoethane	0.591	0.530	10.3	79	0.00	11.93
71	p	2-hexanone	0.376	0.417	-10.9	94	0.00	11.51
72	P	chlorobenzene	1.703	1.520	10.7	80	0.00	12.76
73	p	1,1,1,2-tetrachloroethane	0.562	0.544	3.2	86	0.00	12.68
74	p	ethylbenzene	2.773	2.619	5.6	81	0.00	12.94
75	p	m,p-xylene	1.082	1.016	6.1	80	0.00	13.13
76	p	o-xylene	1.119	1.023	8.6	80	0.00	13.54
77	p	styrene	1.753	1.617	7.8	78	0.00	13.47
			Amount	Calc.	%Drift			

Continuing Calibration Summary

Job Number: MC43041 **Sample:** MSH2567-CC2557
Account: GEI GEI Consultants, Inc. **Lab FileID:** H77078.D
Project: GEI Tufts Street Somerville MA

78	P	bromoform	50.000	49.197	1.6	87	0.00	13.28
79	p	trans-1,4-dichloro-2-bute	50.000	42.885	14.2	82	0.00	13.69
		----------	AvgRF	CCRF	%Dev	----------		
80	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	93	0.00	15.30
81	p	isopropylbenzene	2.797	2.748	1.8	83	0.00	13.91
82	S	bromofluorobenzene (s)	0.946	0.928	1.9	92	0.00	13.96
83	p	bromobenzene	0.823	0.782	5.0	83	0.00	14.18
84	P	1,1,2,2-tetrachloroethane	0.741	0.759	-2.4	90	0.00	13.55
85	p	1,2,3-trichloropropane	0.864	0.815	5.7	81	0.00	13.69
86	p	n-propylbenzene	3.373	3.176	5.8	79	0.00	14.35
87	p	2-chlorotoluene	2.035	1.966	3.4	83	0.00	14.46
88	p	4-chlorotoluene	2.170	2.076	4.3	82	0.00	14.54
89	p	1,3,5-trimethylbenzene	2.402	2.465	-2.6	86	0.00	14.63
90	p	tert-butylbenzene	1.389	1.409	-1.4	85	0.00	14.94
91	p	1,2,4-trimethylbenzene	2.493	2.424	2.8	81	0.00	15.04
92	p	sec-butylbenzene	3.004	2.991	0.4	83	0.00	15.16
93	p	1,3-dichlorobenzene	1.501	1.389	7.5	82	0.00	15.26
94	p	p-isopropyltoluene	2.593	2.593	0.0	83	0.00	15.33
95	p	1,4-dichlorobenzene	1.548	1.461	5.6	82	0.00	15.32
96	p	1,2-dichlorobenzene	1.407	1.354	3.8	85	0.00	15.69
97	p	n-butylbenzene	2.376	2.415	-1.6	84	0.00	15.75
98	p	1,2-dibromo-3-chloropropa	0.083	0.112	-34.9#	111	0.00	16.17
99	p	1,3,5-trichlorobenzene	1.065	1.051	1.3	82	0.00	16.99
100	p	1,2,4-trichlorobenzene	0.588	0.848	-44.2#	115	0.00	17.54
101	p	hexachlorobutadiene	0.417	0.496	-18.9	96	0.00	17.85
102	p	naphthalene	0.586	1.476	-151.9#	191	0.00	17.82
103	p	1,2,3-trichlorobenzene	0.196	0.646	-229.6#	253#	0.00	18.03
104	p	2-Methylnaphthalene	0.000	0.074	0.0	0#	0.00	19.27
105	p	1-Methylnaphthalene	0.000	0.031#	0.0	0#	0.01	19.54

(#) = Out of Range SPCC's out = 6 CCC's out = 0
H76829.D H151123W.M Thu Dec 03 17:43:13 2015

Appendix D

Pre-Sampling Checklists, Air Sampling Checklists, and Photo Logs

GEI Consultants

AIR SAMPLING CHECKLIST

Sampling Location:
29 Knowlton Street - 1st Floor

Sample ID: 045163-29KNOW-1

Date: 7/18/15
Sampling personnel: M. Keller
Summa Canister ID: M115
Flow Regulator ID: MC139
Sample Type / Analysis Method: TO15/Summa
Sampling Start Time: 0646
Sampling Finish Time: 0601

During Sampling	
Time	**Vacuum**

Did Summa canister go to ambient pressure? Yes / **No**
Vacuum pressure reported by Laboratory: ---

Pressure gauge reading (Pre-opening): **Flow Controller:** 30+ in. Hg
Pressure gauge reading (After sample collected): **Flow Controller:** 5 in. Hg

Environmental Conditions (Outside):	**Before Sampling**	**After Sampling**
Temperature (°F):	65.5	67.8
Barometric Pressure (in. Hg):	30.21	30.09
Prevailing Wind Direction:	Calm	Calm
General Weather Conditions:	Overcast	Cloudy

Environmental Conditions (At Sample Location):	**Before Sampling**	**After Sampling**
Temperature (°F):	75.7	76.2
Barometric Pressure (in. Hg):	29.93	29.77

PID readings at sample location (ppm): 0

Photographs taken before sampling? Yes / No **If Yes, what time:** 646 **Taken by:** M. Keller
Photographs taken after sampling? Yes / No **If Yes, what time:** _____ **Taken by:** _____

Was the building aired out prior to sample collection? Yes / **No** **If yes, how long?**
Windows open? Yes / **No** **Ventilation fans?** Yes / No
Was there significant precipitation within 12 hours of (or during) the sampling event? Yes / **No**
Were any of the residents home during sampling? Yes / **No** **If yes, provide detail:** _____
Did any of the occupants NOT follow instruction for residents? Yes / **No** **If yes, describe below:**

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process, as well as a sketch of the sampling location and sample setup indicating height of air intake from ground surface:

Air intake at 54 inches.

GEI Consultants

AIR SAMPLING CHECKLIST

Sampling Location: 29 Knowlton Street - Basement

Sample ID: 045163-29KNOW-B

Date: 7/18/15

Sampling personnel: M. Keller

Summa Canister ID: M413

Flow Regulator ID: MC095

Sample Type / Analysis Method: TO15/Summa

Sampling Start Time: 0644

Sampling Finish Time: 0528

During Sampling	
Time	**Vacuum**

Did Summa canister go to ambient pressure? Yes / No

Vacuum pressure reported by Laboratory: ---

Pressure gauge reading (Pre-opening): Flow Controller: 27 in. Hg

Pressure gauge reading (After sample collected): Flow Controller: 0 in. Hg

Environmental Conditions (Outside):	**Before Sampling**	**After Sampling**
Temperature (°F):	65.5	67.8
Barometric Pressure (in. Hg):	30.21	30.09
Prevailing Wind Direction:	Calm	Calm
General Weather Conditions:	Overcast	Cloudy

Environmental Conditions (At Sample Location):	**Before Sampling**	**After Sampling**
Temperature (°F):	76.6	74.3
Barometric Pressure (in. Hg):	29.94	29.78

PID readings at sample location (ppm): 0

Photographs taken before sampling? Yes / No **If Yes, what time:** 644 **Taken by:** M. Keller

Photographs taken after sampling? Yes / No **If Yes, what time:** _____ **Taken by:** _____

Was the building aired out prior to sample collection? Yes / **No** **If yes, how long?**

Windows open? Yes / **No** **Ventilation fans?** Yes / No

Was there significant precipitation within 12 hours of (or during) the sampling event? Yes / **No**

Were any of the residents home during sampling? Yes / **No** **If yes, provide detail:** _____

Did any of the occupants NOT follow instruction for residents? Yes / **No** **If yes, describe below:**

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process, as well as a sketch of the sampling location and sample setup indicating height of air intake from ground surface:

Air intake at 41 inches.

Air Sampling: 29 Knowlton Street (July 18, 2015)

045163-29KNOW-1

045163-29KNOW-B

PRE-SAMPLING FIELD CHECKLIST FOR INDOOR AIR SAMPLING

Survey Completed by: Margaret Keller Date: 7/18/2015

Site Name: 50 Tufts Street, Somerville, MA Case #: 04516-3

Part I - Occupants

Building Address: 29 Knowlton Street

Property Contact: _____ Owner / Renter / other: Developer

Contact's Phone: home ( )_____ work ( )_____ cell ( )_____

Building occupants: Children under age 13 0 Children age 13-18 0 Adults 0

Part II – Building Characteristics

Building type: single-family residential / **multi-family residential** / office / strip mall / commercial / industrial

Describe building: Building is currently unoccupied and under renovation.

Number of floors - below grade: ___1__ (**full basement** / crawl space / slab) at or above grade: ___3_____

Basement size: _1018_____ ft^2 Basement floor: **concrete** / dirt / floating / other (specify): _____

Foundation type: **finished basement** / full basement / partial basement / crawl space / slab on grade

Foundation materials: **poured concrete** / cinder blocks / stone / other (specify) _____

Foundation integrity: **no crack or open joints** / moderate cracks or open joints / many cracks or open joints

Basement / slab floor: **concrete; good integrity** / concrete with cracks / earthen floor / carpet or flooring

Basement use: storage; infrequent use / **recreation or living space** / bedrooms / other (specify) _____

Type of ground cover around outside of building: grass / concrete / **asphalt** / other (specify) _____

Moisture conditions in basement: wet / damp / **dry** / other (specify)_____

Basement sump present? ***Yes***/*No* Sump pump? ***Yes***/*No* Standing water in sump? ***Yes***/*No* Product in sump? *Yes/No*

Type of heating system (circle all that apply):

hot air circulation hot air radiation wood steam radiation hot water radiation
kerosene heater electric baseboard heat pump other (specify): _____

Type of ventilation system (circle all that apply):

central air conditioning mechanical fans **bathroom ventilation fans**
individual air conditioning units **kitchen range hood fan** other (specify): _____

Type of fuel utilized (circle all that apply):

Natural gas / electric / fuel oil / wood / coal / solar / kerosene / outside (fresh) air intake

Septic system? *Yes / Yes (but not used) /* ***No*** Irrigation/private well? *Yes / Yes (but not used) /* ***No***

Existing subsurface depressurization (radon) system in place? *Yes / **No*** and running? *Yes / No*
Has the building been weatherized with any of the following:
insulation / storm windows / **energy efficient windows** Other (specify): _____

Comments:

Part III - Outside Contaminant Sources

MADEP Comprehensive Site List (1000-ft. radius): _____

Other stationary sources nearby (gas stations, emission stacks, etc.): _____

Heavy vehicular traffic nearby (or other mobile sources): _____

Part IV – Indoor Contaminant Sources – *Use additional sheets if necessary*

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor & room), and whether the item was removed from the building 48 hours prior to indoor air sampling event.

Potential Sources	Location(s)	Removed Prior to Sampling? (Yes / No / NA)
Gasoline storage cans		
Gas-powered equipment		
Kerosene storage cans		
Paints / thinners / strippers	In Basement	No
Cleaning solvents		
Oven cleaners		
Carpet / upholstery cleaners		
Other house cleaning products		
Moth balls		
Polishes / waxes		
Insecticides		
Furniture / floor polish		
Nail polish / polish remover		
Hairspray		
Cologne / perfume		
Air fresheners		
Fuel tank (inside building)	If Yes is, is there an odor near tank? *None / weak / strong*	NA
Wood stove or fireplace		NA
New furniture / upholstery		
New carpeting / flooring		NA
Recent painting in building?		NA
Hobbies - glues, paints, etc.		

Part V – PID Screening - ***Use additional sheets if necessary***

PID screening of annular space around utility pipes through basement wall / floor? ***Yes*** */ no / not accessible*

PID screening of cracks in wall/ floor and/or wall/floor interface: *Yes / no / not accessible /* ***no cracks***

PID screening above space above drain sump? *Not applicable* / ***Yes*** */ no / not accessible*

Results of screening / comments :

All locations screened 0.0 ppm.

Part V – Miscellaneous Items - ***Use additional sheets if necessary***

Do any occupants of the building smoke? *Yes / **No*** How often? _____

Has anyone smoked within the building within the last 48 hours? *Yes / **No***

Does the building have an attached garage? *Yes / **No***

If so, is a car usually parked in the garage? *Yes / No*

Do the occupants of the building have their clothes dry-cleaned? *Yes / **No***

When were dry-cleaned clothes last brought into the building? _____

Have the occupants ever noticed any unusual odors in the building? *Yes / No*

Describe (with location): _____

Any known spills of a chemical immediately outside or inside the building? *Yes / No*

Describe (with location): _____

Have any pesticides/herbicides been applied around the building foundation or in the yard/gardens? *Yes* / No

If so, when and which chemicals? _____

What is the quantity of goods in the basement? As in, if we were to temporarily store all of the goods from the basement, approximately how large of an area would we need? 270 sq. ft.

Appendix E

Field Monitoring Forms and Inspection Logs

Capuano Center Sub-Slab Depressurization System
Monthly Mechanical Inspection Log

GENERAL INFORMATION

			Outdoor Monitoring	Indoor Monitoring
GEI Field Representatives:	M. Keller	Start-time of monitoring work:	2:10 PM	3:05 PM
		End-time of monitoring work:	3:00 PM	3:30 PM
Date:	06/17/15			
Weather:	~75°F, Mostly Sunny			

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	GEI Identification No.	Calibrant	Successful Calibration
PID (ppb)	RAE Systems	miniRAE3000	Rental	100 ppm Isobutylene	100.0 ppm
Manometer (in. H_20)	Dwyer	Mark III-475-0000-FM	N/A	N/A	Zeroed before each reading
Hot Wire Thermo-Anemometer (ft/min)	Kanomax	A034	050183	N/A	Zeroed before each reading

OBSERVATIONS AND MEASUREMENTS

ENCLOSURE MEASUREMENTS

Shed Secure? NA

Condensate Accumulated? NA

Condensate Drained? NA

Combined Influent Flow Rate

Port ID	Flow (cfm)
Manifold 12	77.5
Manifold 13	61.0
Manifold 14	67.9

System Monitoring Points

Port ID	Typical Vacuum Range (in. H_2O)	Vacuum (in. H_2O)	Typical Range of VOCs (ppb)	VOC Concentration (ppm)
Manifold 12	-0.300 to -0.500	0.859	0 to 2000	0
Manifold 13	-0.300 to -0.500	1.543	0 to 2000	0.1
Manifold 14	-0.300 to -0.500	0.884	0 to 2000	0.1

EXTERIOR EXTRACTION MONITORING POINT MEASUREMENTS

Monitoring Point Identification	Status (on/off)	Vacuum (in. H_2O)	VOC Concentration (ppm)
122-1	on	0.683	0
122-2	on	0.691	0
122-3	on	0.674	0
126-1	on	0.687	0
126-2	on	0.535	0
126-3	on	0.608	0
134-1	on	1.273	0
134-2	on	1.406	0
134-3	on	1.399	0
138-1	on	1.381	0
138-2	on	1.405	0
138-3	on	1.316	0.1
142-1	on	0.651	0
142-2	on	0.677	0
142-3	on	0.642	0
146-1	on	0.636	0
146-2	on	0.625	0
146-3	on	0.632	0

Capuano Center Sub-Slab Depressurization System
Monthly Mechanical Inspection Log

INTERIOR MEASUREMENTS

Ambient Air Measurements

Classroom	VOC Concentration (ppm)
122	0
126	0
134	0.2
138	0.1
133	0.1
137	0.2
142	0.2
146	0.3

Sub-Slab Monitoring Points

Monitoring Point Identification	Vacuum (in. H_2O)	VOC Concentration (ppm)
Room 122A	0.052	0.0
Room 126A	0.003	0.0
Room 133A	0.000	0.1
Room 137A	0.000	0
Room 142A	0.017	0.2
Room 146A	0.013	0.1

COMMENTS

Notes:

1. Manifold 12 is the manifold pipe for rooms 122 and 126.
   Manifold 13 is the manifold pipe for rooms 134 and 138.
   Manifold 14 is the manifold pipe for rooms 142 and 146.
2. PID = photoionization detector.
3. ppb = parts per billion.
4. ppm = parts per million.
5. in. H_2O = inches of water column.
6. ft = feet.
7. cfm = cubic feet per minute.
8. NA = Not Applicable.
9. NM = Not Measured.

Capuano Center Sub-Slab Depressurization System
Monthly Mechanical Inspection Log

GENERAL INFORMATION

			Outdoor Monitoring	Indoor Monitoring
GEI Field Representatives:	M. Keller	Start-time of monitoring work:	2:50 PM	NA
		End-time of monitoring work:	4:20 PM	NA
Date:	07/30/15			
Weather:	~95°F, Cloudy			

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	GEI Identification No.	Calibrant	Successful Calibration
PID (ppb)	RAE Systems	ppbRAE3000	592-909246	100 ppm Isobutylene	100 ppm
Manometer (in. H_20)	Dwyer	Mark III-475-0000-FM	N/A	N/A	Zeroed before each reading
Hot Wire Thermo-Anemometer (ft/min)	Kanomax	A034	050183	N/A	Zeroed before each reading

OBSERVATIONS AND MEASUREMENTS

ENCLOSURE MEASUREMENTS

Shed Secure? NA

Condensate Accumulated? NA

Condensate Drained? NA

Influent Flow Rate

Port ID	Flow (cfm)
Manifold 12	84.7
Manifold 13	73.0
Manifold 14	81.3

System Monitoring Points

Port ID	Typical Vacuum Range (in. H_2O)	Vacuum (in. H_2O)	Typical Range of VOCs (ppb)	VOC Concentration (ppm)
Manifold 12	-0.300 to -0.500	0.85	0 to 2000	0.1
Manifold 13	-0.300 to -0.500	1.51	0 to 2000	0.2
Manifold 14	-0.300 to -0.500	0.89	0 to 2000	0.2

EXTERIOR EXTRACTION MONITORING POINT MEASUREMENTS

Monitoring Point Identification	Status (on/off)	Vacuum (in. H_2O)	VOC Concentration (ppm)
122-1	on	0.694	0
122-2	on	0.691	0
122-3	on	0.683	0
126-1	on	0.677	0
126-2	on	0.530	0
126-3	on	0.599	0
134-1	on	1.240	0
134-2	on	1.358	0
134-3*	on	NM	NM
138-1	on	1.268	0
138-2	on	1.333	0.1
138-3	on	1.310	0
142-1	on	0.682	0
142-2	on	0.691	0.1
142-3	on	0.648	0
146-1	on	0.618	0
146-2	on	0.675	0
146-3	on	0.618	0.1

Capuano Center Sub-Slab Depressurization System
Monthly Mechanical Inspection Log

COMMENTS
No one present in school office to allow access to the classrooms. *Monitoring Point 134-3 was inaccessible.

Notes:

1. Manifold 12 is the manifold pipe for rooms 122 and 126.
   Manifold 13 is the manifold pipe for rooms 134 and 138.
   Manifold 14 is the manifold pipe for rooms 142 and 146.
2. PID = photoionization detector.
3. ppb = parts per billion.
4. ppm = parts per million.
5. in. H_2O = inches of water column.
6. ft = feet.
7. cfm = cubic feet per minute.
8. NA = Not Applicable.
9. NM = Not Measured.

Capuano Center Sub-Slab Depressurization System
Monthly Mechanical Inspection Log

GENERAL INFORMATION

			Outdoor Monitoring	Indoor Monitoring
GEI Field Representatives:	M. Keller	Start-time of monitoring work:	2:00 PM	4:10 PM
		End-time of monitoring work:	3:10 PM	4:40 PM
Date:	11/30/15			
Weather:	~40°F, Cloudy			

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	GEI Identification No.	Calibrant	Successful Calibration
PID (ppb)	RAE Systems	miniRAE3000	592-909246	100 ppm Isobutylene	97.1 ppm
Manometer (in. H_20)	Dwyer	Mark III-475-0000-FM	N/A	N/A	Zeroed before each reading
Hot Wire Thermo-Anemometer (ft/min)	Kanomax	A034	050183	N/A	Zeroed before each reading

OBSERVATIONS AND MEASUREMENTS

ENCLOSURE MEASUREMENTS

Shed Secure? NA

Condensate Accumulated? NA

Condensate Drained? NA

Combined Influent Flow Rate

Port ID	Flow (cfm)
Manifold 12	77.3
Manifold 13	43.1
Manifold 14	57.9

System Monitoring Points

Port ID	Typical Vacuum Range (in. H_2O)	Vacuum (in. H_2O)	Typical Range of VOCs (ppb)	VOC Concentration (ppm)
Manifold 12	-0.300 to -0.500	0.832	0 to 2000	0
Manifold 13	-0.300 to -0.500	1.254	0 to 2000	0
Manifold 14	-0.300 to -0.500	1.110	0 to 2000	0

EXTERIOR EXTRACTION MONITORING POINT MEASUREMENTS

Monitoring Point Identification	Status (on/off)	Vacuum (in. H_2O)	VOC Concentration (ppm)
122-1	on	0.624	0.2
122-2	on	0.641	0
122-3	on	0.622	0
126-1	on	0.622	0
126-2	on	0.491	0
126-3	on	0.566	0
134-1	on	0.702	0
134-2	on	1.03	0
134-3	on	1.01	0
138-1	on	0.976	0
138-2	on	1.121	0
138-3	on	1.009	0
142-1	on	0.685	0
142-2	on	0.614	0
142-3	on	0.593	0
146-1	on	0.463	0
146-2	on	0.444	0
146-3	on	0.47	0

Capuano Center Sub-Slab Depressurization System
Monthly Mechanical Inspection Log

INTERIOR MEASUREMENTS

Ambient Air Measurements

Classroom	VOC Concentration (ppm)
122	0
126	0
134	0
138	0
133	0
137	0
142	0
146	0

Sub-Slab Monitoring Points

Monitoring Point Identification	Vacuum (in. H_2O)	VOC Concentration (ppm)
Room 122A	0.042	0.2
Room 126A	0.000	0.0
Room 133A	0.000	0.0
Room 137A	0.000	0
Room 142A	0.010	0.0
Room 146A	0.005	0.0

COMMENTS

Notes:

1. Manifold 12 is the manifold pipe for rooms 122 and 126.
   Manifold 13 is the manifold pipe for rooms 134 and 138.
   Manifold 14 is the manifold pipe for rooms 142 and 146.
2. PID = photoionization detector.
3. ppb = parts per billion.
4. ppm = parts per million.
5. in. H_2O = inches of water column.
6. ft = feet.
7. cfm = cubic feet per minute.
8. NA = Not Applicable.
9. NM = Not Measured.

60 Tufts Street
SSDS Field Monitoring Form

GENERAL MONITORING INFORMATION

GEI Field Representative(s):	M. Keller	**Monitoring Start Time:**	2:00 PM
		Monitoring End Time:	2:10 PM
Date:	06/17/15		
Weather:	~75°F, Mostly Sunny		

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	miniRAE 3000	Rental	100 ppm Isobutylene Time: 1:15 PM	**Y** / N Cal. Reading (ppm): 100.1
Manometer (in. H_2O)	Dwyer	Mark III-475-0 Series	N/A	N/A	Zeroed before each reading? **Y** / N
Anemomaster (CFM)	Kanomax	A034	N/A	N/A	N/A

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration	
Blower Enclosure Secure?	**Y** / N
Blower On?	**Y** / N
Influent Condensate Accumulated?	Y / **N**
Effluent Condensate Accumulated?	Y / **N**
Condensate Drained?	Y / **N**
Hour Meter Reading	N/A
VFD Setting (Hz)	60

Pressure/VOC Measurements

Monitoring Point	Pressure (in. H_2O)	VOC (ppm)
North Header	NM*	NM*
South Header	NM*	NM*
Combined System Influent	5.84	0.0
System Effluent	N/A	0.0
Blower Filter Inlet	12	
Blower Filter Outlet	22	
Ambient Air Outside Blower Enclosure		0.0

System Flow Rate Data

Velocity (feet per minute)	System Flowrate (CFM): = (PI * r^2) * ft per min
2520	213

NOTES:

1. ppm = parts per million.
2. CFM = cubic feet per minute.
3. PID = photoionization detector.
4. N/A = Not Applicable.
5. VOC = volatile organic compound.
6. in. H_2O = inches of water column.
7. VFD = variable frequency drive.
8. Hz = Hertz.

COMMENTS:

* Note: Headers not measured because we did not have access to the building.

60 Tufts Street
SSDS Field Monitoring Form

GENERAL MONITORING INFORMATION

GEI Field Representative(s):	M. Keller	**Monitoring Start Time:**	5:00 PM
		Monitoring End Time:	5:10 PM
Date:	07/30/15		
Weather:	~95°F, Mostly Sunny		

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	miniRAE 3000	592-909246	100 ppm Isobutylene Time: 2:50 PM	**Y** / N Cal. Reading (ppm): 100.0
Manometer (in. H_2O)	Dwyer	Mark III-475-0 Series	N/A	N/A	Zeroed before each reading? **Y** / N
Anemomaster (CFM)	Kanomax	A034	N/A	N/A	N/A

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration

Blower Enclosure Secure?	**Y** / N
Blower On?	**Y** / N
Influent Condensate Accumulated?	Y / **N**
Effluent Condensate Accumulated?	Y / **N**
Condensate Drained?	Y / **N**
Hour Meter Reading	N/A
VFD Setting (Hz)	60

Pressure/VOC Measurements

Monitoring Point	Pressure (in. H_2O)	VOC (ppm)
North Header	NM*	NM*
South Header	NM*	NM*
Combined System Influent	5.61	0.0
System Effluent	N/A	0.0
Blower Filter Inlet	12	
Blower Filter Outlet	22	
Ambient Air Outside Blower Enclosure		0.0

System Flow Rate Data

Velocity (feet per minute)	System Flowrate (CFM): = (PI * r^2) * ft per min
2769	236

NOTES:

1. ppm = parts per million.
2. CFM = cubic feet per minute.
3. PID = photoionization detector.
4. N/A = Not Applicable.
5. VOC = volatile organic compound.
6. in. H_2O = inches of water column.
7. VFD = variable frequency drive.
8. Hz = Hertz.

COMMENTS:

* Note: Headers not measured because we did not have access to the building.

60 Tufts Street
SSDS Field Monitoring Form

GENERAL MONITORING INFORMATION

GEI Field Representative(s):	M. Keller	**Monitoring Start Time:**	3:45 PM
		Monitoring End Time:	4:00 PM
Date:	11/30/15		
Weather:	~40°F, Cloudy		

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	miniRAE 3000	592-909246	100 ppm Isobutylene Time: 2:00 PM	**Y** / N Cal. Reading (ppm): 97.1
Manometer (in. H_2O)	Dwyer	Mark III-475-0 Series	N/A	N/A	Zeroed before each reading? **Y** / N
Anemomaster (CFM)	Kanomax	A034	N/A	N/A	N/A

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration

Blower Enclosure Secure?	**Y** / N
Blower On?	**Y** / N
Influent Condensate Accumulated?	**Y** / N
Effluent Condensate Accumulated?	**Y** / N
Condensate Drained?	**Y** / N
Hour Meter Reading	N/A
VFD Setting (Hz)	60

Pressure/VOC Measurements

Monitoring Point	Pressure (in. H_2O)	VOC (ppm)
North Header	NM*	NM*
South Header	NM*	NM*
Combined System Influent	5.43	0.0
System Effluent	N/A	0.0
Blower Filter Inlet	12	
Blower Filter Outlet	22	
Ambient Air Outside Blower Enclosure		0.0

System Flow Rate Data

Velocity (feet per minute)	System Flowrate (CFM): = (PI * r^2) * ft per min
2605	223

NOTES:

1. ppm = parts per million.
2. CFM = cubic feet per minute.
3. PID = photoionization detector.
4. N/A = Not Applicable.
5. VOC = volatile organic compound.
6. in. H_2O = inches of water column.
7. VFD = variable frequency drive.
8. Hz = Hertz.

COMMENTS:

* Note: Headers not measured because we did not have access to the building.

50 Tufts Street Sub-Slab Depressurization System
Monthly Monitoring Form

GENERAL MONITORING INFORMATION

GEI Field Representative(s):	M. Keller	**Monitoring Start Time:**	1:15 PM
		Monitoring End Time:	2:00 PM
Date:	06/17/15		
Weather:	~75°F, Mostly Sunny		

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	MiniRAE 3000	100 ppm Isobutylene	**Y** / N 100.1 ppm
Manometer (in. H_2O)	Dwyer	Mark III-475-0 Series	N/A	Zeroed before each reading
Anemomaster (CFM)	Kanomax	A034	N/A	N/A

FIELD MEASUREMENTS & OBSERVATIONS

System Status/Configuration	
Fenced Enclosure Secure?	Yes
Blower On?	Yes
Condensate Accumulated?	No
Condensate Drained?	NA
Hour Meter Reading?	70978.6
Lead Carbon Unit?	A
Secondary Carbon Unit?	B
Polish Carbon Unit?	N/A
VFD Setting (Hz)	60

Pressure/VOC Measurements

Monitoring Point	Pressure (in. H_2O)	VOC (ppm)
West Header	-3.335	3.3
Center Header	-3.226	4.7
East Header	-3.259	3.1
North Header	-3.305	37.1
South Header	-3.369	27.8
Combined System Influent	-7.43	5.0
Blower Effluent	35.26	4.8
Lead Carbon Effluent	18.02	0
Secondary Carbon Effluent	1.668	0
System Effluent	Effluent is secondary tank - Tank C offline	
Ambient Air		0
Blower Filter Inlet	15	
Blower Filter Outlet	30	

System Flow Rate Data

Velocity (ft/min)	System Flowrate (CFM):
4114	345

Tank Exterior Monitoring

Bubbling Paint Visible?

Tank	Y/N
A	Yes
B	Yes
C	Yes

Rust Visible?

Tank	Y/N
A	Yes
B	Yes
C	Yes

ABBREVIATIONS	COMMENTS
ppm = parts per million CFM = cubic feet per minute ft/min = feet per minute PID = photoionization detector N/A = Not Applicable VOC = volatile organic compound in. H2O = inches of water column NM = Not Measured VFD = Variable Frequency Drive	

50 Tufts Street Sub-Slab Depressurization System
Monthly Monitoring Form

GENERAL MONITORING INFORMATION

GEI Field Representative(s):	M. Keller	**Monitoring Start Time:**	4:20 PM
		Monitoring End Time:	5:00 PM
Date:	07/30/15		
Weather:	~75°F, Mostly Sunny		

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	MiniRAE 3000	100 ppm Isobutylene	**Y** / N 100 ppm
Manometer (in. H_2O)	Dwyer	Mark III-475-0 Series	N/A	Zeroed before each reading
Anemomaster (CFM)	Kanomax	A034	N/A	N/A

FIELD MEASUREMENTS & OBSERVATIONS

System Status/Configuration

Fenced Enclosure Secure?	Yes
Blower On?	Yes
Condensate Accumulated?	No
Condensate Drained?	NA
Hour Meter Reading?	72012.9
Lead Carbon Unit?	A
Secondary Carbon Unit?	B
Polish Carbon Unit?	N/A
VFD Setting (Hz)	60

Pressure/VOC Measurements

Monitoring Point	Pressure (in. H_2O)	VOC (ppm)
West Header	-3.197	9.7
Center Header	-3.289	14.2
East Header	-3.280	10.0
North Header	-3.444	63.8
South Header	-3.510	52.7
Combined System Influent	-5.821	14.5
Blower Effluent	31.94	16.1
Lead Carbon Effluent	5.811	0.4
Secondary Carbon Effluent	1.566	0.1
System Effluent	Effluent is secondary tank - Tank C offline	
Ambient Air		0
Blower Filter Inlet	15	
Blower Filter Outlet	30	

System Flow Rate Data

Velocity (ft/min)	System Flowrate (CFM):
3799	319

Tank Exterior Monitoring

Bubbling Paint Visible?

Tank	Y/N
A	Yes
B	Yes
C	Yes

Rust Visible?

Tank	Y/N
A	Yes
B	Yes
C	Yes

ABBREVIATIONS	COMMENTS
ppm = parts per million CFM = cubic feet per minute ft/min = feet per minute PID = photoionization detector N/A = Not Applicable VOC = volatile organic compound in. H2O = inches of water column NM = Not Measured VFD = Variable Frequency Drive	

50 Tufts Street Sub-Slab Depressurization System
Monthly Monitoring Form

GENERAL MONITORING INFORMATION

GEI Field Representative(s):	M. Keller	**Monitoring Start Time:**	3:10 PM
		Monitoring End Time:	3:45 PM
Date:	11/30/15		
Weather:	~40°F, Cloudy		

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	MiniRAE 3000	100 ppm Isobutylene	**Y** / N 97.1 ppm
Manometer (in. H_2O)	Dwyer	Mark III-475-0 Series	N/A	Zeroed before each reading
Anemomaster (CFM)	Kanomax	A034	N/A	N/A

FIELD MEASUREMENTS & OBSERVATIONS

System Status/Configuration

Fenced Enclosure Secure?	Yes
Blower On?	Yes
Condensate Accumulated?	No
Condensate Drained?	NA
Hour Meter Reading?	74964.7
Lead Carbon Unit?	A
Secondary Carbon Unit?	B
Polish Carbon Unit?	N/A
VFD Setting (Hz)	60

Pressure/VOC Measurements

Monitoring Point	Pressure (in. H_2O)	VOC (ppm)
West Header	-3.124	65.8
Center Header	-3.128	95.1
East Header	-3.126	65.3
North Header	-3.203	115.2
South Header	-3.216	47.2
Combined System Influent	-5.549	63.6
Blower Effluent	35.71	67.1
Lead Carbon Effluent	26.13	22.6
Secondary Carbon Effluent	1.770	0.3
System Effluent	Effluent is secondary tank - Tank C offline	
Ambient Air		0
Blower Filter Inlet	20	
Blower Filter Outlet	28	

System Flow Rate Data

Velocity (ft/min)	System Flowrate (CFM):
4016	345

Tank Exterior Monitoring

Bubbling Paint Visible?

Tank	Y/N
A	Yes
B	Yes
C	Yes

Rust Visible?

Tank	Y/N
A	Yes
B	Yes
C	Yes

ABBREVIATIONS	COMMENTS
ppm = parts per million CFM = cubic feet per minute ft/min = feet per minute PID = photoionization detector N/A = Not Applicable VOC = volatile organic compound in. H2O = inches of water column NM = Not Measured VFD = Variable Frequency Drive	

Appendix F

EPMM Inspection Forms

EPMM Option 1
Field Monitoring / Inspection Form

GENERAL MONITORING INFORMATION

GEI Field Representative(s):	M. Keller	**Address:**	13 Morton Street
		Monitoring Start Time:	10:50 AM
Date:	07/16/15	**Monitoring End Time:**	11:40 AM
Weather:	Sunny, ~70°F		

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	miniRAE3000	592-909428	100 ppm Isobutylene Time:	(Y) / N Cal. Reading (ppm): 99.5
Manometer (in. H_2O)	Dwyer	Mark 111-475-0 Series	475-000-FM	N/A	Zeroed before each reading? (Y) / N

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration		Pressure/VOC Measurements			
		Monitoring Point	Pressure (in. H_2O)	VOC (ppm)	Location Description (e.g., distance from foundation walls)
Radon Fan On?	(Y) / N	System Influent Pipe	-3.4	1.4	
Exterior Fan Condition (housing, wires, etc)?	(good) / fair / poor	System Influent Pipe (Dwyer Manometer)	-3.322	1.4	
Excessive fan noise?	Y / (N)	SS1	NM	NM	Could not locate
Interior Extraction Pipe Condition (cracks, damage, etc)?	(good) / fair / poor	AA	N/A	0.9	
Exterior Pipe Condition (cracks, damage, etc.)?	(good) / fair / poor				
Leaks Around Slab Penetrations?	Y / (N)				
Slab or Wall Cracks / Openings That Impair System Performance?	Y / (N)				

NOTES:

1. EPMM = Exposure Pathway Mitigation Measure.
2. ppm = parts per million.
3. PID = photoionization detector.
4. N/A = Not Applicable.
5. VOC = volatile organic compound.
6. in. H_2O = inches of water column.
7. NM = Not Measured.

COMMENTS:

Installed remote telemetry on system.

EPMM Option 1
Field Monitoring / Inspection Form

GENERAL MONITORING INFORMATION

GEI Field Representative(s):	M. Keller	**Address:**	31-33 Knowlton Street
		Monitoring Start Time:	9:20 AM
Date:	07/16/15	**Monitoring End Time:**	10:15 AM
Weather:	Sunny, ~60°F		

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	miniRAE3000	592-909428	100 ppm Isobutylene	(Y) N Cal. Reading (ppm): 99.5
Manometer (in. H_2O)	Dwyer	Mark 111-475-0 Series	475-000-FM	N/A	Zeroed before each reading? (Y) N

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration		Pressure/VOC Measurements			
		Monitoring Point	Pressure (in. H_2O)	VOC (ppm)	Location Description (e.g., distance from foundation walls)
Radon Fan On?	(Y) / N	System Influent Pipe (Dwyer Manometer)	-0.164	0	
Exterior Fan Condition (housing, wires, etc)?	(good) / fair / poor	SS1	-0.009	0.5	
Excessive fan noise?	Y / (N)	SS2	-0.014	0.1	
Interior Extraction Pipe Condition (cracks, damage, etc)?	(good) / fair / poor	Ambient Air	N/A	0	
Exterior Pipe Condition (cracks, damage, etc.)?	(good) / fair / poor				
Leaks Around Slab Penetrations?	Y / (N)				
Slab or Wall Cracks / Openings That Impair System Performance?	Y / (N)				

NOTES:

1. EPMM = Exposure Pathway Mitigation Measure.
2. ppm = parts per million.
3. PID = photoionization detector.
4. N/A = Not Applicable.
5. VOC = volatile organic compound.
6. in. H_2O = inches of water column.
7. NM = Not Measured.

COMMENTS:

1. Water was not visible seeping through cracks in the floor or at the system penetrations, however there hadn't been a significant precipitation event recently.
2. Installed remote telemetry on system.

EPMM Option 1
Field Monitoring / Inspection Form

GENERAL MONITORING INFORMATION

GEI Field Representative(s):	M. Keller	**Address:**	35-37 Knowlton Street
		Monitoring Start Time:	8:00 AM
Date:	07/16/15	**Monitoring End Time:**	9:10 AM
Weather:	Sunny, ~60°F		

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	miniRAE3000	592-909428	100 ppm Isobutylene	(Y) N Cal. Reading (ppm): 99.5
Manometer (in. H_2O)	Dwyer	Mark 111-475-0 Series	475-000-FM	N/A	Zeroed before each reading? (Y) / N

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration		Pressure/VOC Measurements			
		Monitoring Point	Pressure (in. H_2O)	VOC (ppm)	Location Description (e.g., distance from foundation walls)
Radon Fan On?	(Y) / N	Ambient Air	N/A	1.2	
Exterior Fan Condition (housing, wires, etc)?	(good) / fair / poor				
Excessive fan noise?	Y / (N)				
Interior Extraction Pipe Condition (cracks, damage, etc)?	(good) / fair / poor				
Exterior Pipe Condition (cracks, damage, etc.)?	(good) / fair / poor				
Leaks Around Slab Penetrations?	Y / (N)				
Slab or Wall Cracks / Openings That Impair System Performance?	Y / (N)				

NOTES:

1. EPMM = Exposure Pathway Mitigation Measure.
2. ppm = parts per million.
3. PID = photoionization detector.
4. N/A = Not Applicable.
5. VOC = volatile organic compound.
6. in. H_2O = inches of water column.
7. NM = Not Measured.

COMMENTS:

1. There is no permanent manometer on the influent pipe at this residence. At the next routine visit, one should be installed. The previously installed sub-slab points were destroyed during the EPMM installation.
2. Rust spots are coming through the epoxy on the north and west walls of the basement (pictures taken).
3. There are some scuffs on the floor and water staining is evident on the floor near the bulkhead door.
4. Installed remote telemetry on system.

EPMM Options 2 and 3
Field Monitoring / Inspection Form

GENERAL MONITORING INFORMATION FOR PASSIVE EPMM SYSTEMS

GEI Field Representative(s):	M. Keller	**Property Address:**	12 Morton Street
		Monitoring Start Time:	1:15 PM
Date:	07/21/15	**Monitoring End Time:**	1:25 PM
Weather:	Mostly Sunny, ~75°F	**Option 2 or 3:**	2 / (3)

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	miniRAE3000	592-909428	100 ppm Isobutylene	(Y) / N Cal. Reading (ppm): 99.9

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration

Exterior Pipe Condition (cracks, damage, etc.)?	(good) / fair / poor
Interior Pipe Condition (cracks, damage, etc.)?	(good) / fair / poor
Epoxy Condition (cracks, peeling, water damage, etc.)?	good / (fair) / poor
Slab or Wall Cracks / Openings That Impair System Performance?	Y / (N)
Downdraft Prevention Cap Present?	(Y) / N

NOTES

1. EPMM = Exposure Pathway Mitigation Measure.
2. Option 2 = Consists of a venting system installed in a shallow trench around the interior basement floor perimeter, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
4. Option 3 = Consists of a venting system installed beneath the basement floor, a new concrete floor slab, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
5. ppm = parts per million.
6. PID = photoionization detector.
7. VOC = volatile organic compound.

COMMENTS

1. Ambient Air = 0.0 ppm
2. Some cracking and peeling epoxy near the water heater/washer and dryer area.

EPMM Options 2 and 3
Field Monitoring / Inspection Form

GENERAL MONITORING INFORMATION FOR PASSIVE EPMM SYSTEMS

GEI Field Representative(s):	M. Keller	**Property Address:**	95R Franklin Street
		Monitoring Start Time:	1:35 PM
Date:	07/21/15	**Monitoring End Time:**	1:45 PM
Weather:	Mostly Sunny, ~75°F	**Option 2 or 3:**	(2) / 3

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	miniRAE3000	592-909428	100 ppm Isobutylene	(Y) / N Cal. Reading (ppm): 99.9

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration

Exterior Pipe Condition (cracks, damage, etc.)?	(good) / fair / poor
Interior Pipe Condition (cracks, damage, etc.)?	(good) / fair / poor
Epoxy Condition (cracks, peeling, water damage, etc.)?	good / (fair) / poor
Slab or Wall Cracks / Openings That Impair System Performance?	Y / (N)
Downdraft Prevention Cap Present?	(Y) / N

NOTES

1. EPMM = Exposure Pathway Mitigation Measure.
2. Option 2 = Consists of a venting system installed in a shallow trench around the interior basement floor perimeter, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
4. Option 3 = Consists of a venting system installed beneath the basement floor, a new concrete floor slab, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
5. ppm = parts per million.
6. PID = photoionization detector.
7. VOC = volatile organic compound.

COMMENTS

1. Ambient Air = 0.0 ppm
2. Small area of peeling epoxy by the washer and dryer.
3. Some paints and cleaning supplies in the basement. Well should possibly be grouted.

EPEM Option 1
Field Monitoring / Inspection Form

GENERAL MONITORING INFORMATION

GEI Field Representative(s):	M. Keller	**Address:**	103 Washington Street
		Monitoring Start Time:	2:00 PM
Date:	10/15/15	**Monitoring End Time:**	3:30 PM
Weather:	Sunny, ~50°F		

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	miniRAE3000		100 ppm Isobutylene	Y / N Cal. Reading (ppm): NA
Manometer (in. H_2O)	Dwyer	Mark 111-475-0 Series		N/A	Zeroed before each reading? Y / N

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration		Pressure/VOC Measurements			
		Monitoring Point	Pressure (in. H_2O)	VOC (ppm)	Location Description (e.g., distance from foundation walls)
Radon Fan On?	Y / (N)	Extraction Point in garage	NM	NM	Inside main garage building
Exterior Fan Condition (housing, wires, etc)?	good / (fair) / poor	Extraction Point in raised slab	NM	NM	Room off of rear of garage - slab is raised from main part of building
Excessive fan noise?	Y / N	SS1	NM	NM	Could not locate.
Interior Extraction Pipe Condition (cracks, damage, etc)?	(good) / fair / poor	SS2	NM	NM	Could not locate.
Exterior Pipe Condition (cracks, damage, etc.)?	(good) / fair / poor				
Leaks Around Slab Penetrations?	Y / (N)				
Slab or Wall Cracks / Openings That Impair System Performance?	Y / (N)				

NOTES:

1. ppm = parts per million.
2. PID = photoionization detector.
3. N/A = Not Applicable.
4. VOC = volatile organic compound.
5. in. H_2O = inches of water column.
6. SSDS = Sub-slab Depressurization System.

COMMENTS:

1. No measurements taken from system. System has not been running for a while. The Garage operator will not run the radon fans.
2. Installed remote telemetry on system. Since system is not running, remote telemetry could not be tested.